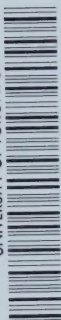


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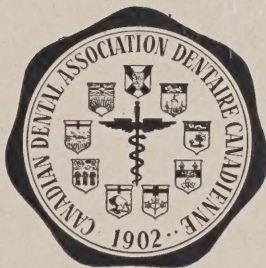
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The Journal of the
CANADIAN DENTAL ASSOCIATION

Le Journal de
L'ASSOCIATION DENTAIRE CANADIENNE



The official organ of the Canadian Dental Association.
Owned and published by the Association.

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Office of Publication
CONSOLIDATED PRESS, LIMITED, 73 RICHMOND STREET W., TORONTO

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The Journal of the Canadian Dental Association *Le Journal de L'Association Dentaire Canadienne*

Official Organ of the Canadian Dental Association

Owned and Published by the Association

Subscription Price Commencing January 1st, 1948 in Canada, Great Britain, the United States and all other countries, \$3.00 per year.

Authorized as second class mail, Post Office Dept., Ottawa.

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Consolidated Press, Limited, 73 Richmond Street West, Toronto 1, Ontario

Branch Offices

New York, 101 Park Ave. Montreal, 915 Birks Bldg. Winnipeg, 305 Birks Bldg.

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*The Editors and members of the
Committee on Publications of the
Canadian Dental Association take
this opportunity of wishing their
many friends throughout the
profession and trade A Happy
and Prosperous New Year.*

*New Year's Greetings
from Our President*

AS the New Year dawns it brings to each one of us new hopes, new inspirations and new resolutions.

May we as members of a health profession endeavour to render greater service during the year 1950.

To every dentist across Canada may I, on behalf of the Officers and Board of Governors of the Canadian Dental Association, extend cordial greetings and wish each member abundant health and happiness throughout the year.

VERNON FISK, *President,*
Canadian Dental Association

TORONTO, ONTARIO



C. H. M. WILLIAMS, D.D.S.
Toronto, Ontario
General Chairman of Convention Committee

ANNUAL MEETING OF
THE CANADIAN DENTAL ASSOCIATION
in cooperation with the
ONTARIO DENTAL ASSOCIATION
May 14 - 17 • 1950

Theme—"PREVENTION and CONSERVATION"

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The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, JANUARY, 1950

No. 1

REVERSIBLE COLLOIDS AS IMPRESSION MATERIALS IN OPERATIVE DENTISTRY

by R. A. CLAPPISON, D.D.S., Toronto, Ontario

THE introduction of the hydrocolloids into operative dentistry by Dr. Andrew Sears of Florida, U.S.A., has stimulated considerable interest in these materials. Many enthusiastic papers have been published over the last few years, yet few practitioners have availed themselves of this splendid technique, which has long been proved worthy of acceptance.

It cannot be said that this enthusiasm has not been justified. Outstanding men like Sears, Knapp, Thompson and others have been using the hydrocolloids for years with results that warrant its continued acceptance. If one is not easily persuaded, the hydrocolloids can readily be investigated and tested in the office without resorting to great expense or trouble.

Hydrocolloids, or reversible colloids, offer accuracy, and duplication of detail that is almost unbelievable. In no other way can consistently accurate duplications of one given preparation be made. Hydrocolloids are not difficult materials to manipulate nor is expensive equipment necessary for proper usage. Some specialized equipment will, however, aid in the speed and ease of manipulation.

The author wishes to point out at this stage that it will only be possible to refer to the major principles in the technique. It is hoped that a brief outline of the fundamentals will stimulate the reader to an unbiased clinical trial of the hydrocolloids. The technique

described is mainly a combination of the efforts of many operators and authors who have contributed much to this field in recent years.

THE TRAY

In the selection of a tray for the impression, it must be borne in mind that it is better to avoid thin sections of impression material in the completed impression. Therefore, an oversize tray is the best. Watercooled trays offer the most efficient method of cooling and the least discomfort to the patient. When an impression of multiple preparations or fixed bridge abutments is being taken, it is better to select a complete, or bilateral tray and to take a complete opposing impression. This enables the carving of the patterns and pontics for a better balance in the occlusion. When a single preparation is being dealt with, it is possible to use a unilateral tray.

The tray should be well post-dammed with compound or wax, and one or two wax or compound stops should be included. (Fig. 1.) The wax or compound can be softened and then the tray seated firmly to give a definite index for the later insertion of the filled tray. Occasionally when the most posterior preparation is a second molar, the ridge in the tuberosity or retro-molar region must be utilized as a rest. When a wax is used, one that softens at a temperature just a little above that of the storage temperature of the hy-

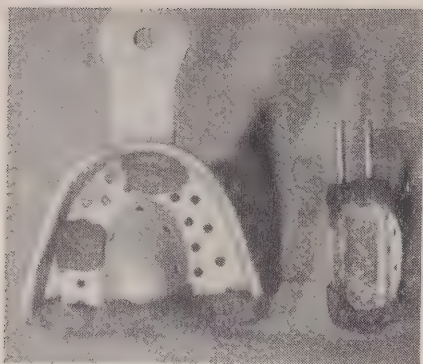


FIG. 1—A complete and a uni-lateral tray post-dammed and stops inserted.

drocolloid is recommended. One such wax is Utility Wax (Kerr).

PREPARATION OF THE TISSUES

The fact that the hydrocolloid in its relatively free flowing condition does not displace gingival tissue, makes it obvious that the gingival tissue must be beyond the gingival margin of the preparation. It must not only be beyond it, but the investing tissues must be dry and free from blood, serous exudate and mucin.

The fact that the hydrocolloid will reproduce accurately only that part of the tooth that can be seen presents a problem, viz., that of the forcing back or removal of the unwanted gingival tissue. There are many ways that this can be done. Whatever method is employed it must be remembered that if the periodontal tissues are not healthy, we are justified in the removal of the abnormal, superfluous gingiva. If the tissues are normal, then more care must be used in their preparation. The interproximal gingiva particularly must be conserved.

There are many ways that the superfluous gingival tissue can be removed. If preparations of a box-like nature are being used, then the cavities can be coated with Benzo-Balsam varnish and temporary stopping inserted into the cavity. The pressure of mastication then reduces the mass of the interproximal tissue. This method often tends to

leave a raw, bleeding surface which interferes with the taking of the impression. This bleeding can be somewhat reduced by the insertion of a small pellet of softened Dunlop Wax before the temporary stopping is put to place.

When dealing with complete or three-quarter crowns, it is possible to pack back the tissues by taking an aluminum shell crown and trimming it so that it extends just into the gingival crevice. A fairly stiff mix of a Zinc-Oxide-Eugenol paste is then inserted into the crown and the crown is put to place. The thick paste when set under pressure distends the gingival crevice in a V-shaped trough, later giving access to the margin of the preparation.

An alternative method, which is successful if the gingival tissues are not too firm, is to take common string, four strand cotton yarn or picture twine and force the tissue back with pressure. It must be done with care so that only the required amount of displacement is produced. The first section of a knot is tied in a piece of the cord and this is slipped over the tooth. The knot is usually kept to the buccal and the cord is slipped gently into the gingival crevice. The knot is then tightened and time allowed for the displacement to take place. The packing is then removed and the tissues checked to make sure that there is no interference. Occasionally it is necessary to re-pack the tissues. In extreme cases the cord is left holding the tissue down while the impression is taken.

Some operators prefer the use of the above twine, cut in one quarter to half inch lengths, and dipped in 80 per cent zinc chloride (or 1:1000 adrenaline to which is added 10 per cent trichloroacetic acid). This wet cord is placed against a piece of gauze so that all excess moisture is removed and then the tissues are dried and the cord is placed in the gingival crevice. This is then allowed to remain a few minutes to produce the desired effect on the tissues.

The author has found that the use of the electrocoagulator or actual cautery,

with anaesthesia, is often an extremely valuable aid. The amount of sear can be controlled, leaving a clean, clearly defined surface with no haemorrhage. The only objection to this method is the odour produced by the coagulation of the tissues. The patient can be prepared beforehand for this and the odour can be quickly removed by spraying a chlorophyll base deodorizer in the room. Again caution must be used so that the coagulation is limited to the formation of a V-shaped trough in the area of the gingival sulcus and not the destruction of the complete interproximal papilla.

In general it might be stated that the depth of the gingival sulcus and the type of gingival tissue that is being dealt with, determines the type of packing to be used.

When the gingival tissues have been cleared from the margins of the preparations, the writer usually follows this routine. First the patient is requested to rinse the mouth out with some form of astringent mouth rinse. This clears away some of the mucin and any residue of tooth substance from the cavity preparations. The teeth are then isolated with cotton rolls and a full strength solution of Essence of Caroid is applied with a cotton pellet to the tissues about the preparations. This breaks down the mucin which is then dried with cotton pellets. Then 1:1000 topical Adrenaline is applied to the tissues to constrict them and also to take care of any superficial haemorrhage. This is dried off carefully after about thirty seconds and the tooth and gingival tissues cleared of free moisture with a blast of warm air. The impression is then taken.

PREPARATION OF THE MATERIAL

Most of the present materials do not need to be mixed in a special boiling and mixing syringe. Simply placing the tube of hydrocolloid in boiling water, for the required time to liquify it, is considered all that is necessary. The average time for liquefaction to be complete is about eight minutes, de-

pending on the hydrocolloid used. This liquified material is then placed in the storage bath of approximately 138-140 degrees. The material can be stored indefinitely at this temperature and kept in a liquified state. For many years the hydrocolloid was not treated any further but Thompson of California recommends tempering of the hydrocolloid at a temperature of approximately 115 degrees for a maximum of ten minutes. The hydrocolloid, after being cooled to the storage temperature, can be loaded into the tray and placed in the tempering bath. The tempering bath can be eliminated but having the hydrocolloid at a lower temperature seems to give sharper reproduction of detail. These three steps are made very simple if a thermostatically controlled three well unit is used. The author uses the Thompson unit with the three wells for liquifying, storing and tempering.

The above instructions are for the preparation of the regular hydrocolloid which is used just as it comes from the dental supply houses. This material is used as the overall or secondary impression after the diluted or primary hydrocolloid is applied to the preparation. This primary hydrocolloid is usually composed of the same ingredients as the regular type except that it contains a higher percentage of water. A simple way to convert regular hydrocolloid to diluted hydrocolloid is to take one inch of the hydrocolloid as it comes from the tube or casing, and to it add 10 cc. of water. Some operators prefer to use the same amount of water but to use one and one half inches of hydrocolloid. The writer has found the consistency of the more diluted material to be better with the brand of hydrocolloid he uses (Surgident). After the water and the hydrocolloid are put together in a beaker or pan, the pan should be set in a vessel of boiling water and as the hydrocolloid melts it should be stirred occasionally to make an even suspension. When thoroughly mixed the suspension of diluted hydrocolloid should be placed in a vessel of

cold water until set. Then the hydrocolloid can be cut into pencil-shaped sticks to fit the small syringe. (Fig. 2.)

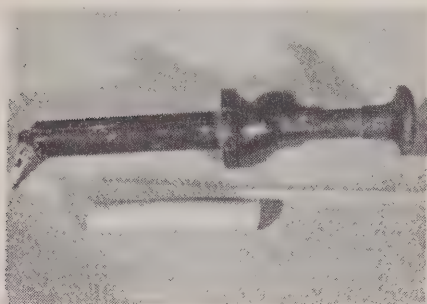


FIG. 2—The small syringe and the stick of diluted hydrocolloid to fit it.

These small sticks should be stored in a closed glass jar, in which a 100% humidity is maintained by the inclusion of a water saturated cotton ball. This material when inserted in the small syringe needs only about three minutes in the boiling compartment to liquify it. It is stored then in the storage bath (140 degrees), until used. It is not tempered in the tempering bath.

THE IMPRESSION

At this point it would be well to review the steps that have been taken thus far. The tray has been selected, post dammed, and the stops placed in it. The regular hydrocolloid has been liquified by boiling, and if not used immediately has been stored in the storage bath. The liquified hydrocolloid is inserted into the tray which is placed in the tempering bath. The small syringe has been loaded and liquified in the boiling bath for three minutes. It is then placed in the storage bath, ready for use.

The gingival tissues and the preparations having been prepared and dried, the assistant removes the small syringe from the storage bath and dries it off and removes the nozzle, and then hands it to the operator. The small syringe is then placed in the mouth and starting at the base of the preparation and in the interproximal, the hydrocolloid

is ejected into the interproximal space. The syringe is moved slowly from buccal to lingual as it is worked to the occlusal to avoid the trapping of air. If the preparation involves the labial or linguo-gingival surfaces, then the diluted hydrocolloid is ejected in these areas as well. The occlusal surfaces and the line and point angles and grooves are then filled carefully and thus the complete preparation is covered.

During the time that the operator is applying the diluted material to the preparations, the assistant has time to remove the tray from the tempering bath, to freshen the surface of the hydrocolloid by wiping off the top layer with an instrument, and to attach the rubber tubing to the tray.

The loaded tray is then placed in the mouth, over the previously applied dilute hydrocolloid. The tubing is attached to the cold water line on the unit and cold water allowed to run through the tubing for five minutes. The impression is then removed from the mouth without too much rocking if possible.



FIG. 3—The completed impression.

The impression (Fig. 3) should then be placed in a 2% solution of potassium sulphate for fifteen minutes. It is obvious that since the hydrocolloid has a high water content, care must be exercised to avoid dehydration or dimensional change. The best way to avoid

this is to pour the model immediately. Failing this, it should be stored in distilled water or the 2% Potassium Sulphate. There is a limit to the time that the impression should be left there, in spite of what the manufacturers say.

THE POURING OF THE MODEL

The model should be washed out gently with cool water, and partially dried with a blast of air. The diestone, (such as Diolite, Akratex, Albastone, Diestone, or other such die materials), should be mixed to a putty-like consistency and vibrated into the impression. The stone can be roughly shaped up to resemble a cone. Ney dowel pins (Fig. 4) can augment the cone-shaped dies

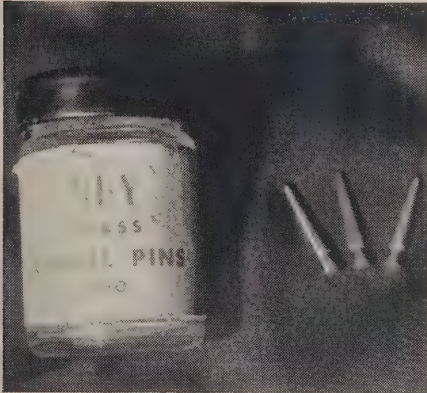


FIG. 4—Ney dowel pins.

as there is less likelihood of any movement or malseating of the die if a dowel pin is used. In the event of multiple adjoining preparations, where there is little interproximal space, it is often found better to take two impressions and to pour the alternate preparations up in each. After the initial set of the stone the impression and the partially set stone should be placed in the 2% Potassium Sulphate or water, until set. The dies are then removed from the impression, trimmed to a definite cone shape with a disc, and soaked in a separating material such as light mineral oil. They are then placed back in the impression and waxed into position



FIG. 5—The dies, with dowel pins, tapered and placed back in the impression.

with sticky wax. (Fig. 5.) This serves a double purpose. It holds them in position and also keeps the prosthetic stone from getting over the preparations. The remainder of the impression is then poured up in dental stone. After the final set it is separated from the model. (Fig. 6.) It is then found



FIG. 6—The completed model and dies after the separation from the impression.

advantageous to place the base of the model on the model trimmer and grind the base away until the bases of the dowel pins of all the dies are exposed. It is then a simple matter to take an instrument and tap the dies out from the model. If the dies were not dipped in light mineral oil, but the bases were vaselined instead, the dies can be soak-

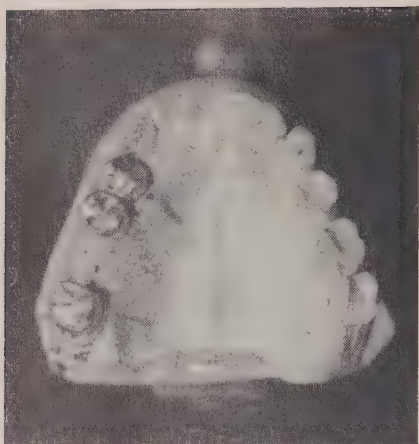


FIG. 7—A practical case after the castings have been made.

ed in Kerr Microfilm as a lubricant for waxing up the patterns. This material is a product of great aid as the patterns do not have to be treated in any way to remove it before casting.

In the case of fixed bridgework, it is found to be an advantage to take a second impression, and pour it up completely in a die stone. The patterns can

be transferred to this to check contacts before casting and the castings can be placed on these abutments for the waxing of the pontic and also for the taking of the index for soldering.

CONCLUSION

As in all operative procedures, success depends upon strict adherence to detail at each step in the procedure. This technique is by no means fool-proof, but if the principles are followed then the result is consistently good. If properly handled, it will give delight to the operator, and a reward for his endeavours that will please the most exacting mind.

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ANNOUNCEMENTS

Annual Convention of the Maritime Dental Association

under the auspices of The Nova Scotia Dental Association
Digby Pines Hotel, August 30th to September 2nd, 1950, Digby, N.S.

American Dental Society of Europe

The Fifty-sixth Annual Meeting of this Society will be held at the American Hotel, Amsterdam, July 19-22. The Committee and Members extend to you a very cordial invitation to attend. Any further information may be obtained from the Honorary Secretary, F. Douglas Derrick, 140, Park Lane, London, W.1.

International Association for Dental Research

The Twenty-eighth General Meeting of this Association will be held March 24, 25 26, 1950, at French Lick Springs Hotel, French Lick, Indiana, in correlation with meetings of the American Association of Dental Schools and the Omicron Kappa Upsilon honorary fraternity.

National Health Week

The sixth annual National Health Week is scheduled for January 29 to February 4.

ROENTGENOGRAMS FOR CHILDREN

by ALVIN FREDERICK GARDNER, A.A., D.D.S., Miami, Florida

FULL mouth roentgenograms for the developing child are a valuable oral diagnostic aid when used as an adjunct to a thorough clinical examination. There is no other single factor that can impart so much valuable information when used to supplement other methods of examination. When considered without other clinical factors, however, they are practically useless. The radiodontic examination has been one of the most important factors responsible for the elevation of the dental profession among the other health professions.

In addition to the full mouth periapical views, I prefer two lateral jaw views, one for each side. The bite wing, occlusal view, and anteroposterior views are frequently of value and should be taken in some instances. Carpal radiograms for the child are another important diagnostic aid to determine the normal bone growth and development of the child's skeletal structures.

In the routine practice for children, there are a considerable number of practical uses of the roentgenogram, i.e., certain conditions which are diagnosed every day because of the indispensability of the roentgenograms.

The following are some of the most important practical aids of the roentgenograms as they pertain to the diagnosis of oral conditions present in children.

PRACTICAL USES OF THE ROENTGENOGRAM FOR CHILDREN

1. *Normal Radiogram of Deciduous Teeth* (Fig. 1):

This radiogram usually includes the first and second deciduous molars and first permanent molar. It also shows the developing first and second bicuspids or their buds in younger children. A deciduous radiogram shows tooth structure, pulp chamber, root canal,



FIG. 1

Radiogram of Deciduous Teeth

periodontal membrane space, periapical space, stratum durum, alveolus, and maxillary or mandibular bones. The deciduous radiogram will show the type and condition of the osseous structure. Normal osseous structures contain trabeculae, within which are located a dark space, called medullary space. The trabeculae become more dense as we approach the alveolar crest, and more defined and smaller. In the body of the bone the trabeculae are larger. Compact bone is more dense and the trabeculae and medullary spaces are very dense and small, thus practically unseen. Alveolar bone is very plastic and transitory, i.e., begins to develop at the time the deciduous teeth are developing and is lost when the deciduous teeth are lost reappearing later with the permanent teeth.



FIG. 2

Recurrence of Decay

2. *As an aid in the diagnosis of dental caries in deciduous and young per-*

manent teeth, (Fig. 2): Roentgenograms can be depended upon to show literally hundreds of cavities overlooked by ocular instrumental methods, and they may be absolutely depended on to show all proximal cavities before the cavities become of sufficient size to endanger the vitality of the pulp. The extent of the caries usually reveals on operation a greater carious area than one would suspect from radiodontic findings. One common mistake in the interpretation of interproximal bite wing negatives is to regard normal-cervical radiolucency as dental caries, but differentiation between caries and cervical radiolucency is not difficult. Interproximal caries are best diagnosed by the use of the roentgenogram. Occlusal and gingival caries may also be diagnosed from the radiogram. There is, however, a limitation on the use of the radiogram to diagnose all caries. Frequently a cavity on the lingual or buccal surface may not show. Alloy fillings present may also prevent the cavities from showing upon the roentgenogram. The roentgenogram is also of aid in the diagnosis of recurrence of decay. Decay present under and around previously placed fillings is best diagnosed by the use of the roentgenogram.

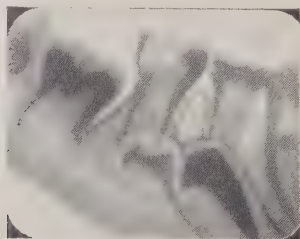


FIG. 3
Exposed Pulp

3. *As an aid in determining the presence of carious exposed deciduous and young permanent teeth*, (Fig. 3): The roentgenogram is of vital importance in determining the type of treatment to be instituted when carious exposed

pulps are diagnosed. From the conditions shown upon the negative the operator can decide upon the advisability of pulp capping, pulpotomy, or pulpectomy. In definite carious exposures of a deciduous molar, I would recommend the pulpotomy operation provided all other conditions are normal as shown by a clinical and roentgenographic examination.

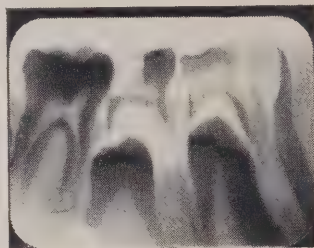


FIG. 4
Acute Abscess

4. *As an aid in determining the presence of acute and chronic infections in the jaws*, (Fig. 4): A definitely infected tooth may show a normal roentgenographic condition; or a radiolucent area in the bone may be shown on the roentgenogram which is attributable to traumatic occlusion or overstimulation and not to infection. Infection cannot be shown roentgenographically; the results of infection, injury, and pathological activity are usually shown. A suspicious tooth is roentgenographed and examined to see whether or not there is a break in the periodontal space around the root; whether or not there is periapical bone radiopacity or radiolucency; whether the lamina dura is intact, and the condition of the root noted as to whether there is roughness or resorption. A nonvital tooth showing any or all of these disturbances may be considered an infected tooth. An acute abscess in a child, no matter how much swelling is present, will not be shown by the radiogram unless bone destruction has occurred. This is due to the fact that in many of these acute cases all of the apparent disturbance is in the soft

tissues. If, however, the acute disturbance is consequent upon the lighting up of an old established periapical infection which was chronic, the condition is readily shown by the roentgenogram. The radiographic representation of granuloma, perialveolar abscess, and radicular cyst may resemble each other to some degree. Although their formation favours each other, it can be said that no one of the three types of destruction is completely susceptible to treatment or is it advisable to permit them to remain after extraction.



FIG. 5

Retained Deciduous Root

5. As an aid in determining the presence of retained deciduous roots and tooth fragments, (Fig. 5): Tooth roots may be fragments of pulpless teeth or they may be ends of vital teeth and may even have vital pulp tissue remaining in their canals. However, their removal is indicated regardless of the case and slated for complete elimination of infectious sources. It may often be difficult to determine whether a definitely outlined mass is a root fragment or a sclerotic mass. The root tip, however, may present a root canal or peridental membrane space in the radiogram, while the sclerotic bone is structureless and ivory like, presumably the result of trauma or chronic infection. The presence of roots and tooth fragments may cause malocclusions of the teeth by causing deflection of the erupting teeth or by creating a space between the teeth.

6. As an aid in determining the ex-

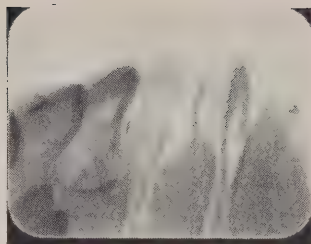


FIG. 6

Fused Deciduous Teeth

tent of fusion of teeth, (Fig. 6): Fused deciduous teeth are fairly common. They usually present a pulp canal for each tooth. The problem here is to determine the opportune time of exfoliation. It is frequently necessary to extract these fused deciduous teeth at the normal exfoliation period of the deciduous tooth that is due to be lost first.

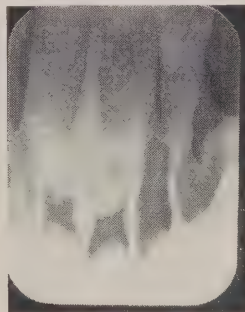


FIG. 7

Fractured Root Due to Traumatic Injury

7. As an aid in determining the presence of fractured deciduous or young permanent teeth after traumatic injury, (Fig. 7): The roentgenogram is of aid in locating fractured roots and also postoperatively, to be sure all of the root has been removed during the surgery.

8. As an aid in determining the condition of the pulp and root in fractured young anterior incisor crowns, (Fig. 8): The radiogram can disclose the degree of fracture of the crown of the tooth plus the approximation of



FIG. 8
Condition of Pulp and Root in
Fractured Teeth

the fracture line to the pulpal tissue or pulpal horns. It can then be decided upon whether pulpcapping, pulpotomy, or pulpectomy operations are desirable or advisable and what type of restoration should be provided.



FIG. 9
Supernumerary Teeth

9. As an aid in determining the presence of supernumerary teeth, (Fig. 9): Supernumerary teeth may frequently be the cause of non-eruption of the permanent teeth and, in such a case, should be removed. The presence of the supernumerary may cause a malocclusion of the child's teeth, with lack of eruption, forcing permanent teeth into an abnormal alignment or causing rotation of teeth. Supernumerary teeth are commonly found in the maxillary and mandibular incisor or anterior region. The roentgenogram is used to determine the cause of maloc-

clusions of the teeth, particularly where the aetiology of the irregularity of the teeth is due to the presence of supernumerary teeth.

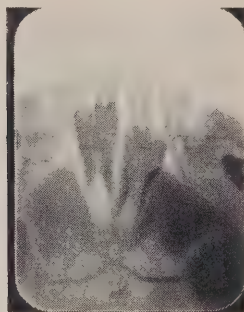


FIG. 10
Opportune Time for Extraction of
Deciduous Teeth

10. As an aid in determining the opportune time of exfoliation of deciduous teeth and eruption of the permanent successor, (Fig. 10): This radiogram is of extreme value since it helps the operator determine whether or not a tooth should be extracted or allowed to remain in place to maintain the arch in correct alignment and prevent collapse and drifting of dental units.



FIG. 11
Congenitally Missing Teeth

11. As an aid in determining the presence of oligodontia, or congenitally missing teeth, (Fig. 11): The mandibular second bicuspid are the most frequently congenitally missing teeth. The maxillary second bicuspid and maxillary lateral incisors are next in order of frequency in congenitally

missing teeth. A problem is created since repair of the deciduous tooth must be instituted when necessary and frequent radiographic examinations are necessary to maintain this tooth as long as possible in the arch. If lost early, space maintenance must be provided to prevent tilting and drifting of teeth. In the anterior region a problem is present and a plan of treatment should be decided upon as early as is practical. Either the space is allowed to close where lateral incisors are missing, or the space is maintained for replacement of tooth structure at a later date. I prefer keeping the space open when lateral incisors are congenitally missing and supplying a prosthetic replacement at a later date. Aesthetically a cuspid or even a reshaped cuspid does not look practical next to a flat incisor tooth.

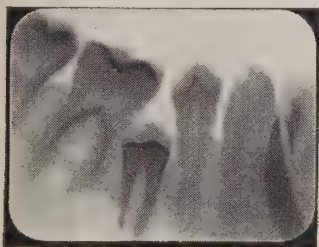


FIG. 12

Position of Unerupted Teeth

12. As an aid in determining the position and location of unerupted teeth, (Fig. 12): This valuable use of the roentgenogram should not be overlooked, especially in the practice of orthodontics since it provides an abundance of information. Where to open spaces in the arch, and where and how to produce tooth movements is dependent upon a knowledge of unerupted teeth.

13. As an aid in determining the degree of drifting or tilting of teeth due to early loss of adjacent tooth structure, (Fig. 13): This information is important since it can be determined from the roentgenogram whether space maintainers should be placed

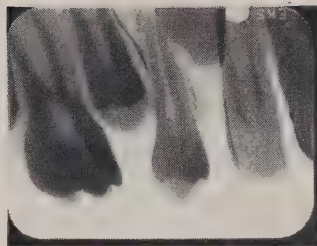


FIG. 13

Degree of Drifting

upon the teeth by the degree of inclination or drifting of the teeth. So much malocclusion could be prevented if complete roentgenographic examinations are made periodically during childhood. It has been agreed by authorities that the incidence of malocclusion could be effectively reduced if the dental practitioner recognized incipient conditions. The common anomalies of eruption and position (supernumerary teeth, congenital absence of teeth, and impaction) are readily detectable during childhood by radiography; and, if corrective measures are instituted at the proper time, malocclusion may be avoided. Therefore, I might say that the first step in prevention is roentgenographic examination in every suspected case. The delay in the eruption of the permanent teeth may be directly attributable to the drifting of permanent teeth after



FIG. 14

Root Canal Therapy

the loss of their approximating teeth. This reduces the amount of available space in the arch for the accommodation of the permanent successor and,

in this manner, delays their eruption.

14. *As an aid in endodontia or root canal therapy on young permanent teeth: to determine the number of canals, possibility of getting into canals, obstructions, perforations, condition of canal filling, and to prove root canal fillings*, (Fig. 14): There is no difference in the appearance as shown by the roentgenogram of pulpal tissue in vital, devitalized, or putrescent pulps. There is likewise no difference in the appearance of the periodontal membrane in the normal state and in the state of congestion or inflammation. The roentgenogram is extremely valuable in determining the condition of deciduous teeth, of their roots, and the surrounding bony structure before and after a pulpotomy or pulpectomy operation. The advisability of performing a pulpectomy or pulpotomy can be determined from the roentgenogram and periodic checkups after the operation can be made by the use of the roentgenogram at definite intervals.

15. *As an aid in determining the presence of calculi or sialolith in the salivary ducts: Sialoliths are salivary stones which form within the parotid, submaxillary and sublingual glands. These calculi may vary considerably in size and shape and, while they usually consist of a single stone, at times a number of small stones will be grouped together into a large mass. Sialoliths may remain within the glands themselves, or may pass out into the ducts, and may be lodged in Wharton's or Stenson's ducts. Both the occlusal and the lateral jaw roentgenograms should be utilized to locate and disclose sialoliths in the sublingual or submaxillary glands or ducts.*

16. *As an aid in determining the variation and condition of the osseous structure in children: Localized radiopacities may occur in the maxillary and mandibular bones of children. Enostosis is an overgrowth or deposit of new bone within the spongiosa of the parent bone. Such a condition is attributed to trauma or infection, or in response to inflammation. Berle be-*

lieves the formation of these osteosclerotic areas may be explained as follows: a kind of callus forms by cicatrization of an old lesion, such a radiopaque formation marks the healing or, at least, the lessening of the virulence of a pathogenic agent. Secondly, they occur as a defense against irritations (trauma) or infections; and against the latter, the bone prevents expansion of a lesion by creating a dense zone which tends to isolate and seal off the injured part. Inflammatory and traumatic enostoses are the main overgrowth produced in the jaws. In osteosclerosis or condensing osteitis we do not see large medullary spaces, but rather small spaces in the roentgenogram. The cancellations are small, well-defined, and even. The trabeculae are wider and heavier. In rarifying osteitis or osteoporosis we find roentgenographically an increase in the size of each cancellation as compared to the average normal ones of a part under comparison. A definite decrease in the number of cancellations per unit of area is present. Also, there is a definite area of increased radiolucency and a tendency toward regularity of size and shape of cancellations. We may find a thinning of the walls of cancellations due to resorption of parts of the wall. In extreme cases, the entire number of cancellations may have been resorbed, leaving only labial and lingual plates.

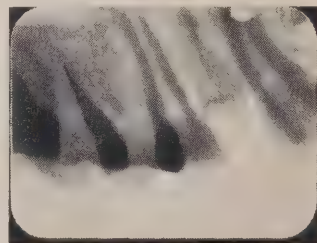


FIG. 15
Degree of Malformation

17. *As an aid in determining the degree and conditions of malformation of the young permanent teeth*, (Fig. 15): The roentgenogram again shows

the extent of the malformation and is valuable in determining what type of reparative service can be rendered. It aids in deciding whether the malformation should be extracted, or aesthetics improved by prosthetic reconstruction.

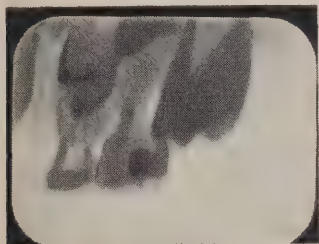


FIG. 16
Pressure Resorption

18. *As an aid in determining the presence of deciduous or permanent pathological pressure resorption*, (Fig. 16): Frequently, due to the location and position of the developing and erupting permanent first molar, an abnormal force or pressure of eruption is placed upon the roots of the deciduous second molars, both maxillary and mandibular. Because of inclination of the mesial aspect of the erupting crowns, the permanent first molars may cause the roots, crowns, and pulpal tissue to undergo pathological resorption with consequent premature loss of the deciduous second molars. The cusps of the developing first molar may be shown almost in the coronal portion of the pulpal tissue. This condition may cause obscure pain and the roentgenogram is also valuable in determining the cause of the disturbance. In addition, it is useful in determining the degree of development and eruption of a normal permanent first molar.

19. *As an aid in determining the size, shape, position, and degree of growth and development of forming teeth and buds*, (Fig. 17): The roentgenogram shows whether the unerupted teeth will assume a normal position or be in malocclusion. It determines approximately what length of time must elapse before certain permanent teeth

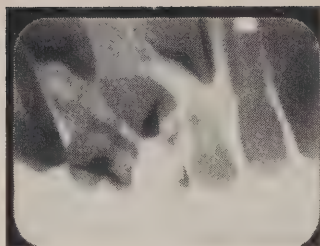


FIG. 17
Determining Size, Shape, Position and Development

will assume their place in the arch. It determines whether and for how long space maintenance will be of value or imperative.

20. *As an aid in determining the presence of calculus on the roots of teeth*: The roentgenogram will show whether there is any calculus unseen or unnoticed in a clinical examination, and also whether the sealing or removal of the calculus has been thorough by a post operative roentgenogram.

21. *As an aid in determining the size and shape of deciduous and young permanent roots*: For the practice of exodontia the roentgenogram is invaluable. It imparts information as to root formation, tooth structure, hidden roots, unerupted and impacted teeth or roots, checking up after extractions, metal in root sockets, bone in root sockets, sharp process and residual infection. For the practice of orthodontics or to accomplish tooth movement the roentgenogram imparts considerable information concerning the root structure. The commencing or degree of root resorption is shown only by the roentgenogram, and is a vital phase of tooth movement since it aids us in checking up on the condition of the roots after tooth movement is instituted. The roentgenographic study of deciduous and young permanent roots will impart considerable information as to the size, shape, length, and degree of root resorption of these teeth.

22. *As an aid in determining the incarceration of deciduous and young permanent teeth*, (Fig. 18): Incarcera-



FIG. 18
Incarceration of Teeth

tion is an imprisoned tooth. The tooth is in the correct position for eruption but has an overlying obstruction. The tooth is said to be in infra-occlusion.

23. *As an aid in determining the cause of odontalgia in children:* The roentgenogram is of value in locating the cause of local or reflex pain in children since frequently they are of such an age and temperament that they are incapable of describing or locating the pain.

24. *As an aid in determining the presence of periodontoclasia:* Here the roentgenogram contributes more toward prolonging the life of teeth than any other single vital factor. Incipient periodontoclasia can be diagnosed and treatment instituted to prevent any widespread or advance stage of periodontoclasia to ever exist. Periodontoclasia cured in its incipency will be due to the periodic use of the Roentgen ray examination. The roentgenogram properly exposed may show soft tissue to a degree only. Periodontoclasia is actually revealed by the alveolar destruction. One cannot tell whether the interdental spaces are filled with hypertrophied tissue or whether the gingival tissue is firm and healthy, with no pockets, unless the clinical examination is correlated with the roentgenographic examination.

25. *As an aid in determining the amount of separation or diastema of the maxillary central incisors:* This condition is frequently caused by a heavy superior maxillary frenum. This frenum is usually tough, elastic, and fibrous; and, therefore, will not allow

the maxillary central incisors to assume contact. In certain cases and frequently with orthodontic aid, a frenumectomy will correct the condition of diastemata.



FIG. 19
Odontoma

26. *As an aid in determining the presence in children of neoplastic growths,* (Fig. 19): A neoplasm is an independent overgrowth of tissue that serves no useful purpose. It is considered to be outside the genetic pattern of the host and out of balance with the other tissues. A neoplastic growth can be either benign or malignant. In the benign neoplasm, there is a marked differentiation of their elements which usually resemble the mother tissue. These benign tumours grow by expansion at a moderate rate, and compress the neighbouring tissues and organs. While they may be multiple, they do not metastasize. A malignant neoplasm, on the other hand, is usually characterized by cells of lower differentiation than the mother tissues. Such a tumour grows quite rapidly and invades the surrounding tissues and organs, having a tendency to involve the blood and lymph vessels. This allows elements of the neoplasm to be carried to remote regions of the body to form metastasis. A factor in the diagnosis of malignancy is the observation of invasive growth of the tumour cells. Neoplasm can be either radiopaque or radioparant depending upon whether they consist of hard or soft tissue. Radiopaque

images are shown by odontoma, cementoma, osteoma, and osteogenic sarcoma. Odontomata, (Fig. 19), are tumours of a benign character. Their recognition is dependent upon the roentgenogram. It usually shows them to be composed of two or more imperfectly formed teeth, numerous small denticles, or a conglomerate mass of radiopaque tissue outlined by a narrow radiolucent border. Periodic radiographs are especially desirable to assure early recognition and to follow its progress.

Bite wing films are an aid in determining the presence of small interproximal caries as well as recurrent caries under restorations. These roentgenograms are also of advantage in the diagnosis of early periodontoclasia because they reveal the condition of the interproximal crests, both upper and lower. This type of radiodontic examination is not self sufficient. It should be used to supplement other radiodontic examinations for children.

Occlusal roentgenograms are an aid in the diagnosis of oral conditions when correlated with the periapical and bite wing examinations. This view will aid in the localization of embedded roots or impacted teeth in both the maxillary and mandibular arch. The occlusal view is also necessary in the localizations of sialoliths in the floor of the mouth. The occlusal view imparts the greatest information when used for localization of impacted cuspids and for oral surgical procedures, also for locating the position of non-erupted teeth.

Lateral jaw or head roentgenograms are of value for children as they show the angle and ramus of the mandible. They are valuable before oral surgical procedures upon children. If the child is of such temperament or will not tolerate or allow the film packet to be placed in the mouth, the lateral jaw view is ideal. Where it is difficult to get a good intraoral view of a third molar area, the lateral jaw is of considerable value in showing the complete area. This view is also useful for the localiza-

tion of impacted teeth or sialoliths or where it is impossible for the smaller intraoral films to show the complete area.

Carpal roentgenograms are an aid in determining the degree of skeletal maturation in children. A negative is exposed of the carpals and metacarpals and the development of the carpal bones is compared with an accepted standard to determine the degree of maturation by the carpal index present.

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Class members please note that arrangements are being made to celebrate the silver anniversary of graduation, at a dinner to be held during the National Convention, May 14-17, 1950, in Toronto.

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Courtesy of Province of Alberta.

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The welcome mat is out for delegates from the home of the Stampeders at the joint meeting of the Canadian Dental Association and the Ontario Dental Association.



Courtesy Travel Bureau, Prince Edward Island.

PROVINCIAL BUILDING, CHARLOTTETOWN, P.E.I.

The Canadian Dental Association in cooperation with the Ontario Dental Association have prepared a welcome to delegates from Prince Edward Island.

ANNOUNCEMENT***University of Toronto, Faculty of Dentistry*****CONTINUATION COURSES FOR GRADUATES IN DENTISTRY****Operative Dentistry****February 13-17, 1950**

A postgraduate course in Operative Dentistry will be held at the Faculty of Dentistry, University of Toronto, during the week of February 13-17, 1950. This course will be under the general direction of Dr. P. G. Anderson, Head, Department of Operative Dentistry.

This course will include discussion of the philosophy of operative dentistry, oral diagnosis, treatment planning, rubber dam and local anaesthesia for operative procedures, a study of dental materials, cavity preparation and insertion of amalgam, silicate, inlays, occlusion and periodontal considerations as related to operative dentistry, mutilated anterior teeth in young and adult patients.

Dr. Carl Miller, outstanding clinician in amalgam restorations, from Cleveland, and Dr. Louis Schultz, Professor of Operative Dentistry, University of Michigan, whose broad philosophy of Operative Dentistry includes biological as well as technical phases of the subject, will be the guest clinicians in this course.

Tuition Fee \$75.00**Enrolment limit 10****Radiography****February 27-March 3, 1950**

A postgraduate course in Radiography will be given by the Faculty of Dentistry, University of Toronto, during the week of February 27 - March 3, 1950. This course will be under the general direction of Doctors H. M. Worth and O. J. Yule.

This course will be devoted to the study of radiographic techniques and interpretation. Commonly used types of intraoral and extraoral techniques will be demonstrated. Interpretation will be correlated with the pathology and histopathology of dental diseases.

Dr. Clarence O. Simpson, Professor of Clinical Radiodontics, Washington University, St. Louis, well known authority in the field of Radiology will be the guest lecturer and clinician.

Tuition Fee \$75.00**Enrolment limit 10****Orthodontics****April 17-21, 1950**

A postgraduate course in Orthodontics will be held at the Faculty of Dentistry, University of Toronto, during the week of April 17-21, 1950. This course will be under the general direction of Dr. Robert E. Moyers, Head, Department of Orthodontics.

The course is designed to give practical instruction and emphasis will be placed on those phases of the subject which present problems to the general practitioner such as:

- (1) Evaluating his cases to determine those which he can treat and those which should be referred to an Orthodontist.
- (2) Determining the construction and indications for the simple type of Orthodontic appliances.
- (3) Diagnostic aids for use in the general practice.

In keeping with these aims we have secured, as guest lecturer, Dr. Burdette L. Gainsforth of Ogalla, Nebraska. Dr. Gainsforth practised for seven years in a town of 3,000 in West, Nebraska. Later he was graduated with an M.S. in Orthodontics. He then practised and taught Orthodontics for four years. He returned to general practice with emphasis on Orthodontics. He was named an Associate Professor of Pedodontics at the University of Nebraska and has appeared as clinician at State Society meetings.

Dr. Gainsforth's experience in this field and his understanding of the problems of the general practitioner will serve to make this course one of great value to all those taking part.

Tuition Fee \$75.00**Enrolment limit 12**

Those interested are asked to inquire respecting enrolment.

Please address inquiries to:—

The Dean,
Faculty of Dentistry,
University of Toronto,
230 College St., Toronto, Ontario.

November 10, 1949

The Forum

TREATMENT OF BRUXISM

by CHARLES F. SUMNER, III, D.D.S., New Orleans, La.

Condensed from Journal of D. Medicine, July, 1949

In all cases, regardless of the aetiology, certain local treatment should be instituted.

The occlusion should be equilibrated so that no one tooth or group of teeth are forced to carry the burden of increased function. Where the teeth have long interfering cusps that prevent free movement and increase the trauma, the cusps should be reshaped. The area of the coronal portion of the teeth should be decreased buccolingually and the fulcrum of the tooth brought to a more favorable position so that the forces on the already weakened bone support may be cut to a minimum. The anatomy of those teeth with flattened cusps should be restored. Simring points out that when cusps and grooves are lost and the teeth remain as only flat surfaces, the food cannot be triturated as efficiently, and increased muscular contraction results in greater total occlusal force.

In all reshaping and equilibration, the original vertical dimension should be maintained.

After reshaping and grinding of the teeth, the operation of equilibration should be completed with careful polishing of the teeth.

The patient should be instructed to massage the facial muscles before retiring and should sleep on his back with a small pillow under his neck. This will result in tension on the hyoid group of muscles responsible for depressing the mandible.

One mode of treatment has been the use of intra-oral splints. Various forms, velum rubber bites, acrylic covering of

occlusal surfaces, and anterior bite planes that take the posterior teeth out of occlusion have been suggested and tried. Some resulted in greater damage than that caused by the bruxism. My experience has been that they are uncomfortable, the patient does not like to wear them and at best they slow the process of destruction from over-function very slightly if at all.

Autosuggestion, which Boyens defines as involving "the repetition of a fixed and positive thought, worded in such a manner that the unconscious reaction is one of harmony and in accord with conscious demand," has been employed in the correction of biting habits. His method is to have the patient repeat to himself just before going to bed, "I will awaken if I bite or clench my teeth." S. C. Miller suggests the patient practice the physiologic rest position of the mandible by repeating to himself during the day, "Lips together, teeth apart."

Autosuggestion has been only mildly effective but should not be ignored. The suggestion should always be an affirmative one "I will" instead of a negative "I will not."

Phenobarbital and other barbiturates have been used in small dosages in some cases to relax the patient. While this therapy may also be an aid when used properly, we must be ever conscious of the possibility of addiction to the drug by the patient. And we must bear in mind that this therapy, like autosuggestion and splints, are not cures because they do not eliminate the cause of bruxism.

SUMMARY

1. Bruxism is a habit that affects a large percentage of the dental patients in every branch of dentistry.

2. It may be detected by taking a careful history, examining the teeth, and roentgenograms.

3. Several mechanical means as well as autosuggestion have been mildly successful but they treat only symptoms and do not remove the cause.

4. Bruxism is an expression of unconscious, aggressive tendencies, suppressed libido and nervous tensions.

5. Severe cases should be treated by a psychoanalytically trained psychiatrist.

6. The dentist is limited in the supportive therapy he can give the patient.

7. The dentist may play a large part in the choice of the psychiatrist.

ORGANIZING YOUR DAY

by JANE NEUNCHEL, Evanston, Illinois

Condensed from Bul. of Ont. D. Nurses' and Assistants' Assoc., Apr. 1949.

How do busy people find time to do all that they do in a day? Isn't it easier to arrange an appointment with a business executive than with a stay-at-home who has nothing definite to do? Both have the same hours in the day, yet one accomplishes what he sets out to do, while the other never seems to have time for anything. With all the activities of modern living, it becomes a matter of organizing: organizing the things we have to do, and then fitting them all into the allotted time we are given to do them. This theory can well be applied to our office management, where a myriad of small duties make up our day's occupation.

To start the morning, it is usually best to spend a few minutes taking stock of the day's routine. Check over the appointments, and take note of the operation to be performed for each patient. Make out a day sheet in duplicate: one for posting at the chair for the Doctor's use, and one for your use in the lab so that you can keep check on the time, materials, to have ready for use at the chair, the next patient, etc. You will find that this carbon copy will save you many extra trips to the desk during the day. Straightening up the office is the next logical step, because one of the first impressions the patient gets is the way the office looks to her. She may not know a gold inlay from

an amalgam, but she will recognize a good housekeeper immediately. See that your office is attractively arranged, well lighted, freshly dusted, and completely aired and ventilated, not only in the morning, but throughout the day as well.

After the first patient of the day has been greeted, and is seated ready for the Doctor, you can check up on the sterilizing table. Are there clean towels, sterilizer clean and full of fresh water, hand-piece oiled and ready for use? It saves annoyance to have everything at finger tip reach when it is wanted. Organize the instruments most commonly used for each type of work in one drawer. Have several sets of the same instruments so that sterilizing can be done after every third or fourth patient, rather than after each one.

Now, check over the x-rays to be developed and mounted, the inlays to be invested and cast, and the other laboratory work on hand. Laboratory work has to be closely checked with the patient's appointment so it will always be ready. At the time the impressions are taken at the chair, and while the patient is still there, go over the case with your Doctor and make a note of the type of restoration which is to be made, the tooth shade and character staining, special designing, and any other details which might be necessary. It is so easy to forget

some little item which may mean the success or failure of the case, and taking a few minutes now to write them down may avoid a misunderstanding or disappointment later. If the case is to be sent to a commercial laboratory, supply all this information to your lab man. It is the only way he has of knowing what you want.

The bookkeeping and patient contact is the most important part of our job so, naturally, a good part of the day will be devoted to that. Here, too, a routine can be worked out so that time can be found for all the extra checkups and calls which mean so much to the success of a practice. Sort the mail for letters which require replies, and then see to it that those replies go out that day. Keep your bookkeeping up-to-date, too. If your Doctor has filled out the patient's record card immediately after the appointment, he will not be so apt to forget to charge for each operation performed, and if you have taken out of file all the record cards for the day, including the one for that extra patient who just ran in for a few x-rays and whose name does not even appear in the appointment book, there will be no charges for services overlooked, and consequently, no financial slip-ups in that direction.

Check over the collection file every few days, and if those accounts marked 90 days or over aren't showing any credits, find out the reason. A phone call or a letter today may mean one less delinquent account a week from now. We have found it most helpful to list and divide all the statements sent each month into 30, 60 and 90 day sections. Forget about the 30-day accounts—they most always are paid promptly, anyhow. Keep an eye on the 60-day ones, but really go to work on the 90-day group. After the patient has received three statements without a remittance, there is usually some very definite reason why it has not been paid. Check up on this.

Keep track of your appointment book. It is much better to have a

definite time in mind for the patient's next appointment than to thumb through a half-dozen pages which will only confuse her as to what day and time she did finally agree upon. If it is at all possible, establish a series of appointments on the same day of the week and at the same time, for a patient who has a great amount of work to be done. It will aid the Doctor in planning his working schedule, help the patient to remember, and save time for you when she leaves, because her next appointment has already been arranged. If an appointment is made some time in advance, it is to your benefit to remind that patient by telephone or mail. Also, keep a list of people who are willing to come in on broken appointments.

In our office, we have found it desirable to keep a one-half hour appointment open each day for emergencies. If no one has called in dire distress by ten o'clock in the morning, I contact someone from the cancellation list who may be able to fill it. Always fill in that particular time in your appointment book with some fictitious name though, so the patient who eagerly peers over your shoulder when you are searching for an appointment for her, will not ask why she can't have that appointment—it looks open to her!

After a patient has had an extraction or particularly painful operation, jot her name down on to-morrow's calendar pad and call her the next day to see how she is feeling.

Another greatly appreciated and practice-building habit is to call or write a personal letter of thanks to the patient who has referred a friend or neighbour to your office for services.

Under the heading of monthly duties will be the sending of statements and recall notices. The statements can be typed at the completion of each case, or held over until the end of the month.

It is well to have a positive approach to patient management. By being

confident in your manner, you unconsciously create a feeling of security and response in the patient.

Satisfied patients are the mainstay of our profession, and their dental health is our primary concern. Their

goodwill is your office's most valuable asset, and perpetuating it is your goal. A well-organized office based on teamwork between the doctor and his dental assistant is a forward step toward attaining this mutual goal.

HALITOSIS: VARIATIONS IN MOUTH AND TOTAL BREATH ODOUR INTENSITY RESULTING FROM PROPHYLAXIS AND ANTISEPSIS

by P. P. MORRIS and R. R. READ
Lambert Pharmacal Company, St. Louis, Mo.

Summary of paper in Journal of D. Research, June, 1949.

I. Saliva putrefies rapidly on incubation, giving rise to very objectionable odours. Dilution with water does not hinder this decomposition. Dilution with only 6 per cent of the antiseptic prevents putrefaction completely. Lesser amounts restrict decomposition.

II. The application of water as a mouth rinse does not affect rate of putrefaction of saliva collected during subsequent two hours. The use of an antiseptic rinse results in a significant reduction in putrefiability; incubation of even the two-hour sample does not give p_0 of 3.

III. The antiseptic mouth rinse is diluted less than 20 per cent on the average during use in the conventional manner.

V. Complete dental prophylaxis reduces mouth and breath odours to an unobjectionable level for more than two hours. It is apparent that many breath odours are oral rather than systemic in origin.

V. Tongue prophylaxis, by mechanical means only, reduces mouth and breath odours to a low level in many instances. However, 6 out of 17 subjects did not respond.

VI. Dentifrice used in the normal manner reduces mouth and breath odours materially, the odour level returning to the objectionable level in two hours. This is not a masking

effect, as the odour of the dentifrice flavour disappeared in less than one-half hour.

VII. Water rinse is without effect on mouth and breath odours. The antiseptic rinse reduces these mouth and breath odours to a low level from which no significant recovery takes place within three hours. This is not a masking effect, as the odour of the rinse disappears in twenty minutes. The effect of the antiseptic is prolonged significantly beyond that of prophylaxis or dentifrice.

VIII. Stagnation of saliva in the mouth overnight can result in an odour intensity of objectionable level, even though the subject has a normally low daytime level. Water rinse does not reduce this odour materially. The antiseptic rinse removes the odour.

IX. Tobacco odours are materially reduced by the antiseptic rinse but not by a water rinse. Smokers appear to have a low mouth or breath odour other than that of tobacco. Cigars produce highest odour levels. Cigarette odours are most readily reduced to a low level.

X. There are certain resistant types of odours, such as that due to garlic, that are systemic in origin and are not affected by water or the antiseptic rinse.

Pound for pound, skim milk contains as much protein, a little more carbohydrate and as much calcium, phosphorus, iron, the B. vitamins and vitamin C, as whole milk.
—Health League of Canada.

SERVICE

by MARY DELL ROBERTSON, President Alabama Dentist Assistants' Association

Reprinted from the Dental Assistant, October, 1949

"Man does not live by bread alone." The person who works solely to make a living misses much of the joy of living. Your job should also provide a means of expression.

Every normal person takes pride in creating something worthwhile. Your job should be an outlet for this innate pride of creation. To do a quality job, to render a superior service, or to turn out work that reflects credit on oneself satisfies this pride of creation. Whether you work with your hands or your mind, the result of your labour should be something to be proud of.

The pride of accomplishment is an inspiration to the ones who do their work well. The person whose sole interest in the job is limited to the pay check, experiences only the drudgery of work. The thrill of accomplishment is missing in that life.

Your job furnishes you the opportunity to develop leadership and status among your co-workers. The quality of your work goes far toward establishing you in the esteem of others. To be well thought of by others is one of life's great rewards. One's self-respect is enhanced by the sincerest respect of others. Your standing in the community and among your professional and vocational associates will grow out of the quality of your own performance.

Many of your best friendships will be formed on the job where daily work brings you into close contact with others. The social aspects of work are important. The kind and quality of work one does frequently determines the character of his friends. There is no richer side of living than the comradeship of working with congenial friends.

By nature, we are gregarious. Only the abnormal person finds satisfaction in living and working alone. The joys of team-work can be found on the job—working with others to reach a goal.

The desire to contribute to a better life for society exemplifies high character. One's work is more satisfactory if he feels that he is contributing something to the welfare of his community and of his country. Nowhere is better opportunity furnished for making a contribution to the well-being of all than through the work one does. Whether a person is helping to make things that satisfy the needs and pleasures of people, or is working to create cultural values in services, in art or literature, he is rendering service to mankind.

Why work? Not merely to pay the rent, to buy food or clothing. These necessities of life will come in greater abundance to the person who finds pleasure in her work and attacks her job with a zest for accomplishment.

Work, when done in the right spirit is the greatest builder of personal character. Honest service, a fair day's work for a fair day's pay, develops in one a sincerity of purpose. Honest effort is good citizenship. Pulling one's own weight in the boat is fair play. The development of habits of honest service builds character in the one who renders the service.

Through the generations, our constantly rising standards of living have maintained high productivity in whatever they did. Our future standards of living depend upon the productivity of each individual.

There is great need on the part of the people of character to resist the influence of the "more for less" attitude, which characterizes all too many of our people. Good work is a reflection of good character.

How can you best serve? Here are several specific suggestions:

First: Do not underestimate your own power to make a worthwhile contribution. Remember the old song, "Brighten the Corner Where You Are?" In other words, start to discharge this responsibility of yours

right on the job you undertake. Make your work the means of expanding our field of service so that larger responsibilities and opportunities will come to you.

Second: Put service above self. Remember the adage, "He profits most who serves best." Serve well and you have little need for anxiety about your reward. But service must come before any expectation of rewards. Your greatest reward will be in the satisfaction of rendering service, in the esteem of those who know you, and in the pride of creation and accomplishment.

Third: Do not be afraid to seek a goal that is high and important. Attainment of the high goal may seem difficult and remote but remember that no job is too big or difficult if you will keep your eye on the goal. Life comes to you only one day at a time, and no day is fraught with too

many difficulties to overcome. Set a worthwhile goal and make each day's achievement a step in the direction of that goal.

Fourth: Adopt for yourself the working principle that what is right is far more important than who is right. Great men and women reach decisions and take action on the basis of what's right not who's right.

In conclusion: Steer the course of your career with an open mind, with tolerance, with fidelity to truth, and with a sincere sense of your social responsibility. Complete satisfaction will come to the one who is doing work she likes and likes those with whom she works.

Presented by:

Mary Dell Robertson, President
Alabama Dental Association Assn.
Annual Meeting, Biloxi, Miss.

CURRENT EFFORT TO CONTROL DENTAL CARIES

by WALTER J. PELTON, D.D.S., M.S.P.H., Denver, Colorado

Summary of paper in Jour., of D. for children, 3rd quarter, 1949

An over-all review of the present status of preventive procedures for caries prophylaxis leads to the following summary conclusion:

It has not been established that any one of the vitamins which may be associated with deficiency diseases can be advocated either in optimal amounts or as supplements to the dietary to prevent dental caries. Drastic restriction of refined carbohydrates consumption is associated with a reduced incidence of dental caries. With the exception of fluorides, the minerals cannot be recommended as supplements to the diet with the assurance that caries will be prevented to any appreciable degree.

The most promising outlook at present for the partial control of dental caries appears to be in the field of fluorides. It has not yet been demonstrated that the artificial

fluorination of communal water supplies is associated with a reduction in caries incidence. The evidence, however, is convincing that such an association does exist, because when fluorides occur as a natural constituent of the water supply, there is 50 to 65 percent less dental caries. That caries incidence can be reduced through the use of topical fluorides has been demonstrated. The manner of using topical fluorides to obtain optimal results with the minimum number of applications has been determined. Investigations and demonstrations of other topical agents such as penicillin, urea and ammonia nitrogen producing compounds, Vitamin K and other quinones, and silver nitrate appear to offer promise. At this time, however, no one of these can be advocated for general use as a procedure for preventing caries.

Do not squander time for it is the stuff life is made of.—Ben Franklin



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Editorial

THE DENTIST AND THE STATE

Several years ago *Medical Times* published the following article entitled "Your Physician" written by Florence Fisher Parry:—"Nothing can take his place—not priest nor minister nor all the clinics that science can provide. There is a rapport and a confidence between him and his patient which has been known to accomplish Miracles, and restore to the breasts of mothers babies about to die, and to the arms of lovers, beloved turned back from Death. For there's something about the very presence of the Family Doctor that casts out fear, melts apprehension, breaks down suspense, performs the simple miracle of Faith. We know how hard the life is that he's chosen. We know that he's abused, imposed upon, worn; that his days are not his own, and his nights are snatched and torn. And, we wonder, where are his rewards? What compensation is his? Oh, I think he is greatly repaid; greatly to be envied. His rewards are kingly prizes. The prize of WELCOME. That's a great reward. To have one's presence a blessing. To know that the mere sight of you brings heart's ease; stirs the wan pulse, brightens the fading eye. The prize of CONQUEST. All men like that. Winning against odds. To stay a fever; energize a pulse; throw breastworks against the advance of disease. Here, indeed, are paths of Glory that do not lead to the grave but away from it. I cannot think of greater conquest. The prize of CONFIDENCE. That's a proud possession. Some priests know it; some ministers; and Friends, if they're time tried. But the Family Doctor is the final confessional, a refuge not only for repentant hearts, but

sick and craven hearts as well. The prize of HUMAN WISDOM—that deep knowledge that comes from being continually exposed to the pitiful frailties of mankind. You do not deceive the Family Doctor; you do not attempt to. But knowing you, he is still compassionate; for he has learned to expect little of greatness in his fellow-man. Above all, I think I envy him his prize of SELFLESSNESS. He is FREE, for he has already given up his life, so has nothing left to fetter him. There is much talk of state control of medicine; and legislation dips its partial fingers into the sterile waters of our doctors, seeking to arbitrate over their mission of mercy. I Dare Say there are certain restricted fields of medicine in whose confines the legislative hand could work productively. But the ineffable value of HUMAN TOUCH in medicine, is something that transcends all legislation. What legislation indeed, what politics, what state control or organized social program, can hope to substitute that HUMAN BOND that exists between the FAMILY DOCTOR and his patient?"

One cannot read such an article as this and not see the fallacy of having the State run the medical profession. The practising dentist does not have the intimate contacts associated with the practice of medicine but he does know what it means to receive the grateful thanks of worried parents for having brought about a condition of health in a sickly child. He does produce beauty where ugliness reigned supreme. He does have the prize of "Conquest" and he, as do all men, likes that. He does gain the confidence of his patients which as has been said is a proud possession and he does experience the "human touch".

Dentistry must cooperate with the State in bringing about a more universal condition of mouth health but it is to be hoped that for the sake of mankind generally the controls are not taken away from the profession and placed in the hands of government agents. Do not let us sacrifice principles for expediency.

A more universal condition of mouth health is certainly needed but this can only be brought about by prevention not cure, by education not treatment, and by a new sense of values. As Dr. Jonathan Forman has said: "The nation can and may well bankrupt itself trying to take better care of more decayed teeth and infected gums as the teeth decay with more rapidity year by year. On the other hand, we could do away with 90 per cent, or more, of the needs for dental care in the next generation if our people would eat the more wholesome better tasting diet which we know how to prescribe. A country that spends more on cosmetics than upon health, more on chewing gum than upon dentistry, ten times as much on liquor and tobacco than it does upon churches and welfare work, needs re-education and a new sense of values."

We have many problems, some of which are becoming more acute every day, but as we start out in another year let us resolve to do our best, let us resolve to support our national dental association more wholeheartedly than ever before, as it can do so much to build up and retain

all that we hold dear in the practice of our profession, and from a personal standpoint let me give this advice from an unknown author.

*"From your last year select the love
And kindly, friendly deeds;
Throw out the disappointments
And the burrs and tangleweeds
And only keep the best that grew,
For next year's garden seeds."*

M.H.G.

CORRESPONDENCE

GUM OR TOBACCO?

To: Dr. J. N. Stewart,
Medical Arts Bldg.,
Hamilton, Ontario.

I have just read your letter in the November Canadian Dental Association Journal.

I am heartily in accord with your expression of opinion. At the Maritime Dental Convention I gave utterance to an "aside" somewhat along the line quoted. It was in the midst of a talk on traumatic occlusion and the failure of modern foods to normally reduce the high cusps of childhood. At the same time I stated that rough natural foods in childhood would stimulate growth of the supporting bone, clean the teeth, etc.

This "aside" was of the same character as the famous one by Osler when he stated that everyone over sixty years of age should be chloroformed.

Some years ago the Health Department of New Hampshire found a group of workers at a paper mill in Berlin N.H. with full dentitions of excellent teeth. Examination did not find any nutritional reason for this. The only aetiological factor appeared to be that they had all chewed tobacco continuously since the age of ten.

I do not favour the general endorsement of chewing gum or tobacco but rather the use of whole wheat bread, raw vegetables and as many natural foods as possible (apples, etc.) I have no doubt as to the effectiveness of plain gum as you advocate but a general recommendation, I fear, would result in the use of the sweetened variety. Treatment of private patients is another matter.

I recall in my youth the habit of using slippery elm bark which being fibrous might have some value.

I have pleasant memories of your visits and clinics in Montreal.

(Sgd.) D. P. Mowry,
Dean, Faculty of Dentistry,
McGill University.

18th Annual Postgraduate Clinic of the District of Columbia Dental Society

To His Excellency,

Mr. Hume Wrong,
Ambassador of Canada,
Washington, D.C.

For many years the District of Columbia Dental Society has staged one of the biggest and best attended dental meetings in this country. The 18th Annual Postgraduate Clinic, to be held here at the Shoreham Hotel on March 12-15, 1950, is expected to be our most outstanding meeting.

We should be most happy to have dental representatives from your country, and many other countries, in attendance at this meeting. We feel that it would assist us in securing favorable public notice in the United States, and would likewise be well regarded in your country.

At this time particularly, when the problem of government-controlled health services is building up in the United States and many parts of the world, we feel that an international aspect to this meeting would be a good thing for your country and ours.

The Federation Dentaire Internationale, world-wide confederation of national dental societies, is now offering membership to members of the American Dental Association (our parent body) for the first time since 1947. By furnishing representation to a big dental meeting in the capital of the United States, you can

contribute to the strengthening of a solid front for world dentistry.

Our plans for the 1950 Postgraduate Clinic are already under way, and we trust that we

may hear from you in this matter at your early convenience.

(Sgd.) William Brown Ingersoll, D.D.S.,
General Chairman.

ROYAL CANADIAN DENTAL CORPS NEWS

From Ottawa

Colonel E. M. Wansbrough and Colonel C. B. H. Climo attended a meeting of the Armed Services Field Materiel Group, from 14 to 19 November, at Washington, D.C.

Dr. M. C. Cole of Port Hope, Ont., has been appointed to The Royal Canadian Dental Corps in the rank of Captain. Captain Cole received his early education at Port Hope, and served in the Canadian Army (Active) for a short period following graduation from high school. He entered the University of Toronto in 1945 with a Dominion-Provincial Scholarship and was graduated this year. He has been posted to Headquarters, No. 13 Coy RCDC (RCAF) at Trenton, Ont.

The following students in their final dental year have been appointed to the Canadian Army Active Force in the rank of Second-Lieutenant:

A. G. Andrews	Toronto, Ont.
W. H. Carter	Lachine, Que.
J. M. A. Donely	Toronto, Ont.
R. A. Fell	Winnipeg, Man.
J. M. Galvin	Toronto, Ont.
J. E. Graff	Toronto, Ont.
R. A. Gray	Edmonton, Alta.
J. R. Harms	Chilliwack, B.C.
W. H. Harrington	Lachine, Que.
H. R. Kettys	Edmonton, Alta.
J. A. Lauziere	Montreal, Que.
F. B. Lavoie	Montreal, Que.
J. G. S. MacIntosh	Wolfville, N.S.
J. E. McNiece	Toronto, Ont.
S. W. Muller	Regina, Sask.

W. O. Mulligan	Westmount, Que.
F. M. Nesbitt	Toronto, Ont.
D. H. Protheroe	Edmonton, Alta.
P. S. Sills	Toronto, Ont.
J. M. Smith	Toronto, Ont.
E. K. Staite	Toronto, Ont.
K. M. Thompson	Regina, Sask.

Annual Mess Dinner at Edmonton

On Friday evening, November 18, at the Connaught Armouries in Edmonton, Alberta, the 3rd Dental Co'y. R.C.D.C. (R.F.) commanded by Lieut. Col. W. E. Addinell held its first annual Mess Dinner.

Each end of the long decorated table was adorned by a roasted whole suckling pig which presented a unique picture.

The invited guests included: Major General M. H. S. Penhale, Officer Commanding, Western Army Command; Commander L. Hoar, Officer Commanding, H.M.C.S. Nonsuch; Wing Commander D. R. Jacox, Officer Commanding, 418 Auxiliary Squadron, R.C.A.F.; Lieut. Col. John W. Proctor, Officer Commanding, 19th Armoured Car Regiment; Lieut. Col. M. Weinlos, Officer Commanding, 36th C.C.S., R.C.A.M.C.; Lieut. Col. D. McLean, Western Army Command; Lieut. Col. M. Dare, Western Army Command; Lieut. Col. G. Keene, Ottawa.

Officers belonging to the unit coming from outside points included: Major M. Warren, Calgary; Major L. Oatway, Red Deer; Capt. L. W. Irons, High River; Capt. D. I. Culham, Ponoka.

CANADIAN DENTAL ASSOCIATION NEWS

From the Office of the Secretary

Dentistry As A Career

With the sole purpose of helping parents, youth and teacher-counsellors to appraise the field of dentistry fairly, an informative booklet has been prepared by the Committee on Public Relations. The Canadian Dental Association is not engaged in recruiting stu-

dents, nor in the mere increase of enrolment in the dental schools. It does believe however, that enlightened society in the years ahead will greatly enlarge the dental service which the public now receives, and that young men and women with good health, with proven scholastic ability, with a genuine bent toward

scientific endeavour, and with the desire to serve humanity in a career which promises reasonable material rewards and great professional satisfaction, might well consider Dentistry. The Canadian Dental Association hopes that this brochure may help many young men and women to determine wisely the choice of a career.

Single copies of this pamphlet may be secured, free, by writing The Secretary, 211 Huron St., Toronto. Quantity rates at publication cost will be quoted upon request.

New Brunswick Increases Grant

Official information has been received that at the Annual Meeting of the New Brunswick Dental Association action was taken to increase the grant to the C.D.A. for 1950. The increased grant will amount to approximately \$15.00 per member.

Action By Newfoundland Dental Association

At a meeting of the Newfoundland Dental Association held in St. John's on October 31, last, a resolution was passed unanimously to forward application to the C.D.A. for Corporate Membership. President Fisk and the Secretary were in attendance and addressed the meeting. The official representatives of the C.D.A. were greeted with a very splendid feeling of full cooperation with the C.D.A. The membership can be assured in no uncertain manner that the entire membership of The Newfoundland Dental Association is anxious to cooperate and support the work of the C.D.A.

Under the by-laws of the Association it is necessary that this application for Corporate Membership be presented at the Annual Meeting of the Association before final action can be taken.

A.D.A. Meeting At San Francisco

The Annual Meeting of the American Dental Association was held in San Francisco October 17-20. In brief summary the following important actions were taken:

1. APPROVAL OF NEW OUTLINE FOR DENTAL HEALTH PROGRAMS

A broad set of principles for the development of national, state and community dental health programs was adopted by the House of Delegates. The statement, which

reiterated the A.D.A.'s opposition to federal compulsory health insurance, urged that children be given a priority for dental health services in community programs. Among the thirteen main points listed for the national program was the declaration that "dental care should be available to all regardless of income or geographic location as rapidly as resources will permit." The statement recommended that a federal department of health with cabinet status be established independently of welfare and educational agencies to coordinate all federal health activities except those of the military services. Other major points called for the expansion of facilities for the training of dental personnel, increased government and private support of research, the construction of additional dental facilities in all hospitals and health centers and the creation of dental health divisions in all state health departments. The statement also urged that voluntary prepayment and post-payment plans consistent with sound experience be adopted and called for the participation of A.D.A., state and district society representatives in the planning of dental health programs. The statement endorsed the principle of federal grants-in-aid to state and communities for the development of state and community programs and called for the establishment of short post-graduate courses which would be available regularly to every practising dentist. Pointing out that there is a need for finding a more satisfactory financing plan to meet dental health service costs, especially for medium and low income groups, the statement suggested the "desirability of establishing experimental voluntary prepayment and postpayment plans." In all cases, communities should have the determining voice in the planning and operation of local programs, the statement said. Seven objectives for community dental health programs were listed as:

1. Help every American appreciate the importance of a healthy mouth.
2. Help every American appreciate the relationship of dental health to general health and appearance.
3. Encourage the observance of dental health practices, including personal care, professional care, proper diet and oral habits.

4. Enlist the aid of all groups and agencies interested in the promotion of health.
5. Correlate dental health activities with generalized health programs.
6. Stimulate the development of resources for making dental care available to all children and youth.
7. Stimulate all dentists to perform adequate dental health services for children.

2. *APPROVAL OF FEDERAL AID TO DENTAL EDUCATION IN PRINCIPLE*

By a standing vote which carried by a majority of approximately two to one, delegates endorsed the principle of federal aid to education. The statement adopted by the House declared that "federal funds, with justification, might be appropriated in support of dental educational programs, provided that such funds should be accepted only with the understanding that the government shall not exercise any control over, or prescribe any requirements with respect to, the curriculum, teaching personal, or administration of any schools, or the admission of applicants thereto."

3. *REJECTED "CLINICAL TRIAL" RATING FOR DENTIFRICES*

The House of Delegates approved a majority report of the Council on Dental Therapeutics that the A.D.A. should discontinue its practice of giving favourable recognition to experimental products by means of listing or acceptance for clinical trial. To date, four ammoniated dentifrices—Amurol, Craig-Martin, DyBasik and Ingram—had been accepted for clinical trial. This limited acceptance of these products is now withdrawn.

4. *WITHDREW ENDORSEMENT OF SOCIAL SECURITY MEASURE*

Pointing out that the "real security of the professionally self-employed lies within the individual and in his contribution to the community rather than in any government-sponsored system of old age insurance," the House of Delegates directed the A.D.A. Council on Legislation to oppose federal social security legislation which would include dentists. In this action, the House reversed a decision of the 1948 House in which the Association was placed on record asking Congress to include dentists under the provisions of the old age and survivors' insurance program of the federal government. Delegates also approved the establishment of the following priority list for the Council on Insurance in its development of an expanded insurance program for A.D.A. members: (1) increasing the benefits of the present line of group life insurance; (2) survey the field of group permanent insurance; (3) group annuity; (4) group accident and sickness insurance; (5) workmen's compensation; (6) professional liability; and (7) owners', landlords' and tenants' liability insurance.

5. *REITERATED OPPOSITION TO FEDERAL COMPULSORY HEALTH INSURANCE*

6. *VOTED DISAPPROVAL OF A PROPOSAL THAT DENTAL NURSES BE PERMITTED TO PROVIDE LIMITED DENTAL SERVICES FOR CHILDREN AFTER TWO YEARS OF TRAINING.*

NEWS FROM THE PROVINCES

ONTARIO

Report of Dental Public Health Conference November 10, 11, 12, 1949

During the three days, the conference arranged by the Department of Dental Public Health was attended by forty-one members of the profession who are interested in or actively engaged in Dental Public Health. The wide distribution of enrolment is indicated as follows: Toronto 16; Hamilton 3; Ottawa and Niagara Falls each 2; and one from each of the following: Owen Sound, Grimsby, St.

Catherines, Willowdale, Kitchener, Welland, Cannington, Belleville, Milton, Sudbury, London, Peterborough, and Lucknow. In addition the six men registered in the Dental Public Health Course attended most of the sessions. These graduate students represent the provinces of British Columbia, Saskatchewan, Ontario and Quebec.

Guest lecturers on the program included Dr. Harold Hillenbrand, Secretary American Dental Association; Dr. E. W. McHenry, Professor of Public Health Nutrition, School of Hygienic; and Mr. D. B. W. Reid, Assistant Pro-



DENTAL PUBLIC HEALTH CONFERENCE

fessor of Biometrics, School of Hygiene and Connaught Laboratories. The Director of the School of Hygiene, Dr. R. D. Defries, and Dr. H. W. Reid, Dr. R. R. Butler, Dr. H. Thomson and Dr. W. J. Dunn assisted six members of the staff of the Faculty of Dentistry in the Conference program. The subjects discussed during the Conference included: "Definition and policy as it relates to Dental Public Health programs," "Statistical methods and a consideration of dental records," "Review of United States programs and policies," "Program planning in the field," "Nutrition education as it relates to dental public health," "A consideration of preventive or control measures from the viewpoint of the periodontist, orthodontist, and general practitioner," and "Educational methods in dental health programs." Ample opportunity for discussion was provided those in attendance, throughout the Conference and toward the end of the Conference, certain resolutions were introduced concerning matters related to Dental Public Health problems.

Academy Winter Clinic

As usual this feature of the annual program for this Association was well organized

and attracted a good attendance. Dr. Earl Bancroft and his committee did a good job on planning and arrangements and are to be commended for their efforts.

Among those who took part in the day's activities by presenting group clinics were: Dr. R. M. Appleman, Chicago; Dr. Frank C. Hughes, Indianapolis; Lt. Col. K. M. Baird, O.B.E.; Lt. Col. G. B. Shillington; Major B. P. Kearney, M.B.E., all from the Royal Canadian Dental Corps School, Ottawa; Cmdr. W. C. Wohlfarth Jr., Dental Corps, U.S. Navy; Dr. Robert E. Moyers, Department of Orthodontics, Faculty of Dentistry, Toronto; and Drs. F. T. Pearson, G. W. Johnston, D. H. MacDonald, R. A. Clappison, W. G. McIntosh, T. R. Marshall, A. W. S. Wood, G. C. Hare, C. E. Aho, and W. P. Arkle, all of Toronto. Then of course there was a fine array of table clinics and demonstrations given during an evening session when dentists, dental nurses and dental assistants, dental technicians and members of the dental trades and manufacturers' association continued to present ideas and suggestions that were very instructive.

In addition to the above perhaps particular reference should be made to a luncheon address

by Mr. Don Graham entitled "New Frontiers of Education," and a symposium by Drs. S. A. MacGregor, J. Harry Ebbs, Wm. A. Hawke and Byron Hughes entitled, "Habits in Relation to Mouth Health."

Speaking of education, Mr. Don Graham, who is principal of Forest Hill School, Toronto, gave a very instructive address. Education has always been a subject on which there are many points of view and it was most informative to hear Mr. Graham's discussion. The speaker suggested that vocational training for a specialized way of making a living was important but the primary motive in education was the training of the individual for citizenship—for adjustment to the complications of modern society. Young people should be taught to critically evaluate what they read and to do this there must be a background of knowledge of our traditions or else they discover they have no roots. It is important that there should be a continuity of cultural and spiritual resources if our democracy is to survive.

The ends of education are wisdom, spiritual insight and character. Education is the development of all the talents of the individual for socially useful living; and the challenge of the school is to discover the talents of the child; and to develop them for what purpose? So that new skills and knowledge will be developed to make the individual a good citizen. In conclusion the speaker remarked that, "All planning in the material level without inner terms of reference will fail."

The symposium on habits and their relation to mouth health was perhaps the feature presentation of the day. To Dr. Armitage Cox, chairman of the meeting, goes much credit for bringing the discussions to a conclusion that was informative. In the following paragraphs an attempt is made to indicate some of the main points in each speaker's address—

Dr. S. A. MacGregor introduced the discussion and pointed out: 16 children in every 100 have a severe malocclusion because of thumb sucking . . . 41 others have a less severe type. He asked the pediatrician to recognize this dental problem. At the age of two and one half years, the dentist should be consulted about the child's mouth health; up to that time habits are the problem of the pediatrician and psychologist. In a reply to a question, "If a child of two and one half years has a thumb sucking habit without any evidence of deform-

ity, should an appliance be used to break the habit?" The answer was no. It was a problem for the health counsellor to treat the child psychologically and have the dentist watch for evidence of malocclusion.

The second speaker on the symposium was Dr. J. Harry Ebbs, pediatrician. He emphasized the key to the practice of pediatrics was prevention. He traced the development and growth of the child from the inception of pregnancy to birth and on through child life. He pointed out the rapidity of growth in the developing foetus, pressures that occur prior to birth and the pliability of bone structures in early life. He suggested that malformations of jaws might be due to such other factors as well as post natal habits.

Of course the pediatrician sees the child first for care after birth. He has the first opportunity to observe and detect beginning malformations of any part of the body. When thumb sucking is present he should not use such devices as gloves, mittens, etc. because psychologically these things create an issue between the child and the parent which is very bad. The pediatrician should talk to the parent and try to create an environment for the child such that his attention is directed to something else.

Dr. Ebbs was of the opinion that the child should be sent to the dentist for consultation between 2 and 3 years of age; further he felt the whole problem of habits and the parent public would be helped if professional people would not express personal opinions publicly before consulting the views of other professions that were concerned.

Dr. Hawke presented the argument for the psychologist and psychiatrist. He stated that the habit of sucking was a natural reflex of every child at birth. The mouth of the infant is its most important sensory organ and that sucking gives a sense of satisfaction. If babies are not allowed adequate periods of sucking time they become restless and irritable whereas when normal periods are allowed they are quiet and happy.

The infant gets its food through sucking; if it gets its food in a short time, it still has the urge to suck and there is a tendency to suck its thumb or fingers. It was contended that the food and bottle should be adjusted to give the infant adequate sucking time and this should be supplemented by periods of parental

fondling and affection for emotional satisfaction.

The sucking habit normally and automatically reduces to biting and then later the mouth as the chief sensory organ is replaced by the hands. Children are apt to suck their thumbs during the first year, then less and less and finally the habit is discontinued. If however the habit is continued after the first year, the speaker emphasized the necessity of investigating the parent child relationship as to incompatibility, conflict, security and affection. He advised against making an issue out of the habit by advising against the use of splints, mittens and so forth.

In case of the pre school child, it was quite another problem and was usually a sign of personality difficulty. A study of the environmental approach should be made to correct the habit and if malformation is present use a non irritating appliance. The school child should be treated similarly.

Dr. Byron Hughes of Ann Arbor, Michigan, inferred that there was considerable confusion among parents as to the effect of thumb sucking which in a large measure was due to discussions between professional people and parents that should only occur between professional people themselves. (I think he meant we should be sure of our own knowledge on the subject.)

He suggested it was a great offence for parents to superimpose upon the child their personal worries. Thumb sucking is prevalent in proportion and to the extent of neurosis of the parent; a happy parent is important.

Babies need to be fed either naturally or by bottle in the traditional fashion then fondled, rubbed, manipulated and given affection. Shift from the sucking experiences to rubbing the gums, playing with the lips, tickling his tummy and so forth—in this way you change the attention from the sucking habit to a play period where sucking is forgotten. Dr. Hughes' admonition was to "Have Fun With the Baby."

When the habit becomes established it was the speaker's opinion that psychological approach does not work because the particular parent is incapable of applying the proper psychological treatment. Good nutrition however is important because it is conducive to healthy tissues and therefore tends to prevent the extent of distortions.

In concluding the meeting Dr. Halderson

expressed the appreciation of all assembled for a splendid contribution to the understanding of the problem of habits in relation to mouth health.

T.R.M.

Faculty of Dentistry News University of Toronto

Provincial Distribution of Undergraduate Students in Faculty of Dentistry, University of Toronto.

The policy of admitting to the undergraduate course as many as possible of the applicants residing outside the Province of Ontario is being continued, as is evidenced by the registration figures for the past three sessions, as follows:

	1947- 1948	1948- 1949	1949- 1950
Ontario	435	453	442
Nova Scotia	2	1	1
New Brunswick	1	1	1
Prince Edward Island	0	0	0
Quebec	2	2	1
Manitoba	20	21	26
Saskatchewan	36	32	34
Alberta	7	8	7
British Columbia	25	29	24
United States	1	1	—
Newfoundland	0	0	0
Elsewhere	31	5	3
	560	553	539

Visitors to the Faculty during November

Dr. Ernest F. Deck, dental practitioner of Sydney, Australia, and former teacher in the University of Sydney, visited the Faculty building on November 18. Dr. Deck's son, Roger, was registered in the Faculty in September, 1938, receiving the D.D.S. Degree in the following June.

Dr. Alf. Siburg, Director of the School Dental Services, Gothenburg, Sweden, visited this Faculty on Monday, November 21.

Mr. Gurpal Singh, Trade Commissioner for the Government of India visited the Building on Thursday, November 24. Mr. Singh is interested in the education of students from India, particularly as it relates to the enormous program planned by the Government of India for the training of professional personnel.

Orthodontia Clinic

The federal government has agreed to meet the costs of equipping and partially staffing a

preventive orthodontia clinic in the Hester How School, Toronto.

The clinic has a three-fold purpose: education, prevention and treatment. The clinic will provide consultation services for parents with a child who has malocclusion. Some cases may only require instruction on the elimination of such bad habits as mouth-breathing or the prescription of exercises to stimulate the growth of and to strengthen lip and cheek muscles. When treatment is required, most cases will be referred to private dentists, with the clinic treating only a limited number of simple cases.

The dental laboratory of the clinic will be able to provide space maintainers for use in the 36 dental clinics throughout the city. This procedure will help eliminate many of the irregularities resulting from too early loss of the foundation molars.

The federal grant of more than \$15,800 will pay the cost of equipping the clinic and laboratory, two operative dentistry units, an oral surgery unit, and a complete dental x-ray unit. Part of the staff is being obtained from other posts in the Toronto City health service, but federal funds will be used to pay salaries for an additional full time orthodontist, an orthodontic technician and a dental assistant.

Notice for Class 1900 Reunion Toronto

Members of the graduating class of 1900 plan to hold a reunion during the National Convention to be held in Toronto, May 1950.

The address of the following members are not known. If anyone knowing their whereabouts would kindly forward information to Dr. F. P. Moore, 6 James Street, South Hamilton, it would be appreciated—

Dr. T. B. Armstrong
Dr. J. R. Atkinson
Dr. J. V. Bridge
Dr. L. Doering
Dr. P. K. Grist
Dr. E. C. Hoskin
Dr. G. P. Howard
Dr. Edward C. Jones
Dr. J. M. McFarlane

Kitchener Dental Society

A combined medical-dental meeting sponsored by the Public Health Department and

the Kitchener Dental Society was held in the Kitchener Armories on November 25. Guest speaker for the evening was Dr. S. A. MacGregor of Toronto who is well known across Canada and the United States by all members of the profession. Dr. MacGregor gave a stimulating address on dental disease and child health, stressing the point that we have, in the past, been putting the "cart before the horse" and treating disease rather than preventing it; however, a new era has dawned and prevention should be uppermost in the thoughts of every practitioner.

There was a mutual feeling between the dentists and physicians present that the combined meeting should become a yearly event.

TED CONEY

QUEBEC

Mount Royal Dental Society

A general meeting of this Society was held on November 18 at the Mount Royal Hotel. The meeting took the form of an all day clinic with morning and afternoon session.

The clinician was Dr. Harold K. Addelson, Associate Professor of Pedodontia at New York University. His topic for the day was "Dentistry for Children." This was presented in a most instructive manner with the aid of both films and slides.

NOVA SCOTIA

Halifax Dental Society

At a meeting of this Society held at the Nova Scotian hotel, Nov. 24, the speaker was Dr. G. R. Rice, a member of the Department of Public Health, and his subject was, "Dental Caries in Children from a Public Health Viewpoint."

He stated that, in his official capacity, he saw more children's mouths than any of the dentists, and that he deplored the condition existing in a great majority of them. He urged all personnel and agencies who are endeavouring to cope with this problem to greater activity, and particularly stressed the necessity of more publicity, in an effort to arouse public opinion, by education, to the end that more school dentists might be appointed, and greater effort generally made to cope with this serious state of affairs.

In the list of officers elected by the Nova

Scotia Dental Association, and recently published the following names were omitted:

The delegate to the C.D.A.: Dr. G. M. Dewis, Halifax, N.S.; alternate delegate C.D.A.: Dr. H. M. Eaton, Halifax, N.S.; representative to D.D.C.: Dr. W. C. Oxner, Halifax, N.S.; alternate representative: Dr. J. W. Dobson, Halifax, N.S. W.C.O.

BRITISH COLUMBIA

Vancouver and District Dental Society

This Society continues with its fine series of programs for the monthly meetings. Late fall meetings presented Doctor Jack Werner, of the Dental School of the College of Physicians and Surgeons of San Francisco, on Full Denture Prosthesis, and Doctor Scott Hamilton, Dean of the Dental Faculty of the University of Alberta, on "Problems in Oral Surgery of Interest to the General Practitioner." At a dinner meeting, Doctor Hamilton showed slides and films on "Oral Surgical Techniques and Procedures for the General Practitioner." It was a welcome change to have one of our own leading Canadian clinicians for these meetings.

Following the practice of the past few years, the first monthly meeting of the year was devoted to clinics by home talent, and the Society is developing some fine clinical talent among its own members.

Four new members—Doctors Richard Cline, Sidney Smordin, Kosta James Killas, and Alan Breen were welcomed to membership in the Society recently.

Victoria and District Dental Society

This Society welcomed the visit of the President and Secretary of the Canadian Dental Association in November last. Another November meeting heard Doctor Homer of the Veterans' Hospital staff speaking on the treatment of osteomyelitis.

It is not at all unnatural to speak of golf in the winter time, under the heading of Victoria news. In the early winter tournament of the Society, Doctor McGuiness won the Ash Temple Cup, and Doctor Kjeksted carried off the B.C. Dental Supply Cup. Another cup donated by Ernie Hetherington was won by Doctor Campbell.

Fraser Valley Dental Society

A little farther east, in the Fraser Valley, the Fraser Valley Dental Society continues with its very fine monthly series of meetings. It is not an unusual experience to register one hundred per cent attendance of the dentists of the district at these meetings, held at various centers in the Valley each month. Dr. Clay Hallman, of Vancouver, on Full Denture Prosthesis; Dr. Lloyd Jacobson, of New Westminster, on Amalgams; Dr. McClure, a physician from Mission, on Hospital Procedure, and Dr. Scott Hamilton, of Edmonton, Alberta, on Oral Surgery, have been recent clinicians.

The December meeting of the Society was held at the home of Mrs. Pyke of Cloverdale, B.C., an assistant to Dr. Rife, of that city. The D.A.'s of the Valley united to present the bosses with a turkey dinner and all the trimmings. If the D.A.'s function as efficiently in their office duties as they did in the serving of the dinner, the dentists of the Society are to be highly congratulated.

Kootenay Dental Society

This Society was re-organized at a late fall meeting. Dr. Clay Hallman, of Vancouver, was guest clinician. Almost a full attendance was present from Nelson, Trail, Rossland and Castlegar.

Doctor Gullett Visits Vancouver

Dr. Don Gullett, while visiting in Vancouver, addressed a luncheon meeting of the Health Insurance Study Group of that city.

The Jacobson Clinic

Dr. Lloyd Jacobson, of New Westminster, who has presented his clinic on "Amalgams" in many cities of Western Canada and the north western States, has been honoured by being chosen to present a short post-graduate course on Amalgam Technique at the University of Washington in Seattle.

ALBERTA

Edmonton and District Dental Society

The fall meeting of this Society opened up on October 4, 1949. Dinner was called for 6:30 p.m. at the MacDonald Hotel. There

were present 62 members. The following outside members were introduced:

Dr. S. Hardin, Vegreville,
Dr. K. F. Robins, Edson,
Dr. A. Harder, Barrhead,
Dr. G. Robinson, Westlock.

The R.C.D.C. in Western Command was represented by Maj. Shragge and Capt. Windsor.

After a few introductory remarks by President, Dr. Harold Knight, Dr. Sperry Fraser, who has been taking post-graduate work in California, was welcomed back into the society.

Steps were taken to bring an outstanding clinician on removable partial dentures.

The following dental students of Alberta University were introduced at the meeting:

Mr. Friesen, who won the second year prize of the Edmonton Dental Society.

Mr. Tom Demco, who won the Alberta Dental Association Scholarship in third year.

Mr. Lou Haig, who won the Edmonton and District Dental Society Scholarship last year.

Each of the above gave a little talk thanking the dental profession for the prizes which they were fortunate to win.

The main topic of discussion for the evening was the latest trends in preventative dentistry as carried out by bacterial counts carried out at the University of Alberta. This subject was introduced by Dr. H. R. McLean, Professor of Operative Dentistry at the University of Alberta, who gave statistics on the occurrence of dental caries in the military call-up—in school children—description of activities now going on to discover ways and means of establishing a caries control in research units throughout the United States.

Conclusion: Dietary and carbohydrate restriction seems to be the solution if the people would conscientiously cooperate.

Miss Mary Louise Knowles, who is the laboratory technician in this work at the Dental Faculty at the University of Alberta, explained the technique in establishing the count of the lactobacilli. She also explained the method whereby the practitioner in his office could avail himself of this service.

Dr. J. Neilson, Associate of Periodontia and Preventive Dentistry, followed up with a discourse giving the history of dental caries from early ages, stressing the use of carbohydrates in great quantities by people on the

North American continent — stated that the total elimination of dental caries is not obtainable but a 40% elimination might be optimum—suggested a method of carbohydrate elimination would have to be on a mass and cheap basis and not by individual treatment.

A very lively discussion took place among the various members on the question of preventive dentistry. — Slides were shown and cultures were demonstrated under a microscope—Dr. Orobko thanked the members who presented such an interesting paper.

A special meeting of this Society was held in the Jasper Room of the MacDonald Hotel on November 17 with 73 members present and all the members of the senior class of the Dental Faculty of the University of Alberta. The following visitors attended: Dr. Greene, Innisfail; Dr. Janzen, Wetaskiwin; Dr. Husband, Red Deer; Dr. Burnham, Bonnie Doon; and the following from Western Command Headquarters: Col. MacLean, Capt. Windsor and Capt. Dyer.

At this meeting the Society was honoured by the presence of Dr. Fisk, President of the Canadian Dental Association and Dr. Don Gullett, Secretary of the Canadian Dental Association.

At a short business meeting previous to the speakers a motion was passed that the Edmonton Dental Society would extend an invitation to have a combined convention of the Canadian Dental Association and the Western Canada Dental Society in Alberta in the year 1953.

The speakers of the evening were introduced by Dr. Art Rooney, past President of the Canadian Dental Association. Dr. Fisk gave a very complete résumé of the activities of the various committees appointed by the officers of the Canadian Dental Association. He mentioned that discussion of such an enthusiastic group as the Edmonton Dental Society which passed on its suggestions to the C.D.A. might eventually be carried out as a policy.

The underlying theme of his whole address was public dental health and it was suggested that in around four years from now health insurance with respect to dentistry will be brought in to effect by a governing body. He mentioned that Alberta had shown leadership in public dental health and with the plan that they have been using to give dentistry to a certain group of individuals during the last



VISIT OF DOCTORS FISK AND GULLETT TO EDMONTON

Head Table Guests

Left to right: Dr. Baden Powell, Dr. H. Bulyea, Dr. R. A. Rooney, Dr. Vernon Fisk, Dr. H. Knight (President), Dr. Bruce Cameron (Secretary), Dr. Don Gullett, Dean Scott Hamilton.

three years. It was suggested also that dental hospital services should be planned during the present hospital expansion which is taking place all over the Dominion of Canada. Research should be encouraged and dentists should be trained in research technique covering the public dental health field. In discussing dental education it was demonstrated that the council appointed by the Canadian Dental Association in this work has great influence on the dental teaching schools throughout the Dominion.

The make-up of our National Journal was discussed by Dr. Fisk who demonstrated that it was a magazine of high repute, that it would have to have a bolstering of finance to carry on and keep up the standard which it now has.

The next speaker was Dr. Don Gullett who is most favourably known to all the members of the Edmonton Dental Society. His visits are looked forward to by all our members and when Don speaks, you can always tell that he

is giving us a message worthwhile by the rapt attention of all our members.

The subject of his address this evening was "Trends" and he suggested that isolated facts which were channelled together would develop into and make a trend. In developing his line of thought in this regard many illustrations were brought in to show that if the dental profession itself does not help to bring forward a different method of giving dentistry to the people this dentistry will be given by bureaucratic methods. He stated that emphasis now should be put on prevention by the profession without delay and that to institute this work leadership should be taken over by an individual who has become trained in public dental health.

The attitude of the profession has got to change from one of complacency and indecision to one of alertness in the development of the field of preventive dentistry.

Dr. Harold Knight, President of the Dental Society then presented both speakers with a

gift stating that these gifts were to be carried home and presented to their wives.

Dr. V. Lloyd then thanked the speakers for the message that had been conveyed to the society and a hearty vote of thanks was passed.

The regular December meeting of the Society was held on the 6th in the MacDonald Hotel. The meeting consisted of afternoon and evening clinics and also entertainment by Ameen Gamon and his Sons of the West. There were 75 dentists present including 13 from the country and points as far away as a hundred miles. The out of town dentists were:

Dr. W. Jansen, Wetaskiwin.
 Dr. W. A. Johnstone, Fort Saskatchewan.
 Dr. A. Harder, Barrhead.
 Dr. L. Holmes, Wetaskiwin.
 Dr. I. W. Dunbar, Camrose.
 Dr. S. Hardin, Vegreville.
 Dr. J. B. Long, Red Deer.
 Dr. H. B. Ness, Camrose.
 Dr. G. Robertson, Westlock.
 Dr. H. Moore, Lacombe.
 Dr. S. J. Martens, Lacombe.
 Dr. K. Robins, Edson.
 Dr. S. Adams, Ponoka.

The clinician for the day was Dr. Sperry D. Fraser, Associate Professor of Prosthetic Dentistry at the University of Alberta. His topic was "Present Day Functional Requirements of Full Dentures". Dr. Fraser is a graduate of the University of Alberta and has been on the teaching staff for some time. He has just completed a year's post-graduate study at the University of California on Prosthetic Dentistry. The address was supplemented by models and a series of motion pictures on the "House Technique".

During intermission a film loaned by "Ducks Unlimited" was shown. A steak dinner was served to everyone. During dinner a sing-song was capably led by Bill Janzen.

Dr. Phil Kendal presented some recordings made by the Southern California Dental Society on Dental Education and other records by Bob Hope, Bing Crosby and Amos and Andy were given.

There were in addition to the members of the Society 50 dental students present which added to a very rousing meeting.

After the conclusion of the clinic Dr. Jim McLean thanked Dr. Sperry Fraser for the capable manner in which he presented this

new type of work and on behalf of the Society made a small presentation. W.E.A.

Calgary Dental Society

The members of this Society were treated to an interesting discussion on the "Fitzgerald Long Cone Technique in Roentgenology" at their October meeting by Dr. Bay from the local society. The speaker stressed the advantages of this technique as giving greater clarity, minimizing distortion, and avoiding the shadow of the malar process. His talk was very much enjoyed by all present.

The November meeting brought the annual visit of the C.D.A. president, Dr. V. G. Fisk, and Secretary, Dr. D. W. Gullett. Dr. Fisk brought the members up to date on the activities of the various C.D.A. committees and Dr. Gullett discussed the "Trends of Dentistry" in Canada. Once again, our thanks to those who are doing so much for us in guiding the destiny of our profession in Canada. C.J.

Lethbridge and District Dental Society

The November meeting of this Society was held on 9th. Guest speakers were Dr. Vernon Fisk, President of the Canadian Dental Association, and Dr. Don Gullett. Wednesday morning Drs. Fisk and Gullett were taken on a tour of the new St. Mary's Dam by Dr. Wayne Matkin and Dr. Don Rylands. In the afternoon the addresses were given followed by a general discussion and dinner at six p.m.

SASKATCHEWAN

The Council of The College of Dental Surgeons Honours Dr. Paul Winthrope

The following is a copy of the certificate presented to Dr. Winthrope:
 Whereas:

Dr. Paul Walker Winthrope has for more than forty years made an outstanding contribution to the dental profession as councillor of the College of Dental Surgeons of Saskatchewan, member of the board of dental examiners and member of the Senate of the University of Saskatchewan, in the several executive offices of the Western Canada Dental Association

including that of President, as general practitioner and as friend and counsellor of his fellow dentists, therefore, be it resolved that this council confer on Dr. Winthrope an Honorary Life Membership in the College of Dental Surgeons of Saskatchewan.

M. J. McDonell, D.D.S. President
W. M. Blair, D.D.S. Vice-President
L. J. D. Fasken, D.D.S. Registrar

November 1949

Saskatchewan Dental Council

The Annual Meeting of this Council was held at the Bessborough Hotel, Saskatoon on October 29-30-31. The purpose of meeting in this city as was done one year ago, was to enable the councillors to meet with the members of the Board of Examiners, the Chairman of the latter being Dr. W. P. Thompson, the President of the University.

Dr. M. J. MacDonell and Dr. W. Blair were re-elected to the offices of President and Vice-President respectively. Dr. L. J. D. Fasken was re-appointed as Secretary Treasurer for another five year term. The Council is composed as follows:

President.....Dr. M. J. MacDonell.....Saskatoon
Vice-Pres.....Dr. W. Blair.....Regina
Sec.-Treas.....Dr. L. J. D. Fasken.....Regina
Executive.....Dr. W. Hancock.....Ft. Qu'Appelle
Dr. L. Hare.....Moose Jaw
Dr. J. Whyte.....Swift Current

Saskatchewan Board of Examiners

The Board of Examiners has been very busy the last two years reorganizing the rules and regulations, endeavouring to bring them up to date in every way. This year, as last year, the board had three meetings, one of which was with the Provincial Council. It is felt that considerable progress has been made by these meetings which have all had one hundred per cent attendance.

Chairman Dean Lindsay.....Faculty of Medicine,
Univ. of Sask.

Dr. Hall Melfort
Dr. Lowey..... Moose Jaw
Dr. Reid Regina
Dr. Smith Saskatoon
Dr. Haselton Saskatoon



DR. PAUL W. WINTHROPE

Saskatoon Dental Society

This Society held a special meeting to entertain the members of the Provincial Council and the Board of Examiners in the Bessborough Hotel on Oct. 31. There was a large number in attendance to welcome the guests.

The regular monthly meeting had as its guest Dr. D. L. Gibson, the head of the Dairy Department of the Univ. of Saskatchewan. Dr. Gibson presented a most interesting lecture on the subject of Milk, and led a very enthusiastic discussion. This meeting was truly a highlight and it is possible a phase of research work may develop from this meeting. Dr. Gibson has had considerable experience in the field of food and nutritional research.

On November 18 the Society called a very special meeting to entertain two distinguished guests in the persons of Dr. Vernon Fisk and Dr. Don Gullett, President and Secretary respectively of the Canadian Dental Association; and also to do honour to a very highly esteemed member of the local society namely Dr. Paul Winthrope.

The Saskatchewan Dental Council recently



DR. L. J. D. FASKEN

at its Annual meeting unanimously voted to honour Dr. Winthrope by presenting to him a Life Membership in the provincial Association. The occasion for this presentation was that of the visit of the officers of the Canadian Dental Association to Saskatoon.

The President of the Provincial Council, Dr. M. J. MacDonell, paid tribute to Dr. Winthrope for his many outstanding contributions to the profession and to the community during the past forty years, and Dr. L. J. D. Fasken, the Provincial Secretary handed the Certificate of membership to him. Dr. Winthrope replied in a very fitting manner.

Dr. Fisk extended greetings, both personal and on behalf of the Canadian Dental Association, and expressed his appreciation of the

work of the members of the Western Canada Dental Society.

Dr. Gullett, in his address admonished the members to accept the rightful responsibility of the profession to accept the challenge facing us today in the field of Preventive Dentistry and Public Dental Health.

For this auspicious meeting the Vice-President Dr. Blair of Regina, and a past President Dr. Lorne Connell, of Prince Albert, of the Provincial Council attended as guests.

L.D.H.

Dr. Fasken Honoured

Dr. L. J. D. Fasken of Regina, Secretary of the Council of the College of Dental Surgeons of Saskatchewan since this province was formed in 1907, and Past President of the Western Canada Dental Society, was honoured at San Francisco in October by being made a Fellow of the American College of Dentists.

MANITOBA

Winnipeg Dental Society

The Announcement of the November 21st meeting of the Winnipeg Dental Society said "We are fortunate in having as our clinician, Dr. Frank Hughes, Professor of Prosthetic Dentistry, University of Indiana." The quotation was an understatement. Dr. Hughes talks as if he knows his specialty and impresses his listeners that he does. He does not make rash statements, readily acknowledges that some authorities do not always agree with him and may be right in disagreeing. The most impressive feature of his lectures is that he is a man of very wide and long experience in practical application of his skill and theories and is still ready to learn from others' experience. The University of Indiana is fortunate indeed to have services. We can cordially recommend him to any dental organization as a well worth-while clinician. J.F.M.

If the profession is to extend its services to greater numbers of people it must employ a greater number of auxiliary aids. In accepting the responsibility of employing such aids, the profession must assume the responsibility for their education and activities.—From Editorial in J.A.D.A., Nov. 1949.

The shadow falling across your path may be that of your ship coming in. — Juliette Laine

DENTAL ASSISTANTS

QUEBEC

Montreal Dental Nurses' and Assistants' Association

The fifteenth annual meeting of this Association was a huge success. It was held in the Mount Royal Hotel on October 19-21, 1949.

Registration of the nurses preceded the opening ceremonies which were conducted by Miss Margaret Good, the President and Miss Pat Doyle 1st Vice-President who spoke on the convention Theme "Progress".

Greetings were extended to the dental nurses and assistants by Dr. D. P. Mowry—Dean of the Faculty of Dentistry, McGill University, Dr. E. Charron, Dean of the Faculty of Dentistry, University of Montreal and Dr. A. D. Richardson, President of the Montreal Dental Club.

Guest Speakers at the convention were The Rev. Roland Bodger, Dr. J. Rauch, Dr. L. Rosen, Dr. J. C. Flanagan, Dr. H. H. Pearson, Dr. J. W. Singer, Dr. J. D. Gage, of Cleveland, Ohio, Dr. J. A. Salzman, New York, N.Y. and Dr. L. B. Amyot, Schenectady, N.Y.

On Wednesday evening a reception was held for the nurses, doctors and their wives; the executive was gratified with the large attendance.

On Thursday after the luncheon, the annual reports were read by the retiring officers; followed by the election of the Executive and Committee Chairman for 1949-50. The new slate is as follows:—

President	Margaret Good
1st Vice-President	Pat Doyle
2nd Vice-President	Ernie Derrick
Treasurer	Joan Green
Secretary	Kay Walhausen
Archivist	Annie Ratner
Registrar	Lois Winters
Editor	Mildred Rosenberg
Asst.-Editor	Madeleine Lefebvre
Program	Mary Moore
Social & Reception	Amy Bellis
Convention	Lorna Haynes & Dora Good
Publicity	Iris Moore & June Baker
Membership	Dorothy McRae & Olivette Caza.

Miss Mildred Rosenberg, our editor of the monthly bulletin, won the Silver Trophy for

the most interesting table clinic at the convention.

BRITISH COLUMBIA

Vancouver Dental Assistants' Association

There was a grand turn out of girls for the first fall meeting of this Association which was held on Oct. 4, 1949, with twelve new members in attendance.

This was strictly a business meeting opened by the Pres. Miss Elenor Sanderson.

Plans were made for a dance to be held in November, from which half the proceeds will go to charity. Arrangements were also made for the annual Christmas cocktail party in December.

MECHAL JAUQUES

ALBERTA

Edmonton and District Dental Nurses' and Assistants' Association

This first fall meeting of this Association which was the election meeting was held in the Ash-Temple offices on September 21.

Miss J. Campbell presided and the following executive was elected—

President	Miss G. St. Arnaud
Vice-Pres.	Miss M. Hamm
Secretary	Miss C. Bigsby
Treasurer	Mrs. R. Hamilton

Plans were made to join with the Calgary, Red Deer and District girls for a Fall Clinic to be held in Red Deer at the end of October. A good representation is expected from Edmonton, and it is most promising to note the enthusiasm of the girls planning to attend.

It was decided to have members of the association visit the Veterans' Hospital once a month.

The annual dance is to be held in mid-November with Miss N. Beckett and Miss M. Butterworth in charge of arrangements.

A number of new members were welcomed at this first meeting. The keen interest shown by all was most promising.

On November 29-30 a clinic was held for the dental nurses of Alberta at Red Deer.



MISS GERRY ST. ARNAUD
Edmonton, Alberta
President Edmonton Dental
Assistants Association, 1949-50

Twelve members of the Edmonton Association joined with assistants from Calgary, Red Deer and numerous district points in the most educational and inspiring Fall Clinic. It was

very fortunate to be able to have three outstanding clinicians who chose topics of interest from the viewpoint of dental assisting and thus left knowledge that will make everyone better assistants. Dr. Husband of Red Deer gave a clinic and talk on aspects in dental anaesthesia. Dr. L. Brooks of Calgary gave a short talk on rudiments in oral surgery. Dr. J. W. Neilson, Associate Professor of Peridontia at the University of Alberta gave a clinic on preventive dentistry.

Congratulations are due to the Calgary assistants for this most successful clinic. They spent much time and effort in its organization and we are certain it will set a pattern for successful clinics in Alberta. W.E.A.

Saskatoon Dental Nurses' Association

The regular meeting of this Association was held on Nov. 8, at the home of Gwen Hogan. It was well attended and many points of business were discussed. Program suggestions were voiced for the meetings to follow. Dr. Wm. T. Waite gave a short talk on the "Introductory Phases of Dental Nursing."

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

On November 14 this Association had as guest speaker Miss W. Blocher, Fashion Coordinator for T. Eaton Co., who gave a very interesting talk on style and materials, also a vivid description of a Fashion Show.

F. JEFFREY

What is it that determines whether or not a person has social sense? Does it come to a man with his chromosomes? Is it derived from good upbringing? Is it driven in by good schooling? Or is it derived in part from all three? It is difficult to say. Like good manners, there is marked inconsistency in its distribution. Of two blood brothers, brought up in the same home, going to the same house together at the same school, one may be gifted with them, while the other remains conspicuously without. Like good manners, too, it is based on a continuous and almost subconscious consideration for the existence of "the other fellow". But whatever the aetiology, one thing is certain of both social sense and good manners: in some people they are lamentably lacking.—Guy's Hospital Gazette.

Six kinds of love a man must have for a complete life—for his wife, for his children, for his friends, for his neighbours, for his work and for God. — D. H. Lawrence

EMPIRE NEWS

GREAT BRITAIN

The Minister's Review

Figures which illustrated the strain the Health Service has imposed on the dental profession were given by the Minister of Health in a review of the first year's working of the scheme at a Conference of representatives of the British and foreign Press. These showed that eight and a half million patients had been treated in England and Wales by 9,400 dentists in the course of fifteen months. These figures relate to completed cases only and, therefore, do not give a wholly accurate picture, since they cover the initial three months of the service and include no allowance for partially completed treatment. Taken by themselves they show that the average number of patients treated per annum by each dentist in the service was at least 720. No information is available as to the number of patients who had had more than one course of treatment, and this may well be considerable. If, however, these two reservations are kept in mind the crude figures supply some indications of the trend of demand on the service. Eight and a half million is approximately 20 per cent of the population of England and Wales and this figure for fifteen months gives an annual demand rate of 16 per cent. It can, therefore, be deducted that the actual rate has been somewhere between the two figures and may at times have been running at a figure even higher than 20 per cent. These figures relate only to the general dental service and necessarily take no account of the treatment given to school children or in Maternity and Child Welfare centres or to that obtained by private patients. However, when every allowance has been made, a demand rate of this order, although much in excess of expectations, is still so far below the known need for treatment that there can be but little prospect of any substantial easing of the strain for some years to come.—From Editorial in *Br. D. Jour.*, Oct. 21, 1949.

Dentists in the Health Service

Answering a question in the House of Commons, the Minister of Health said there were 9,468 dentists on the lists of Executive Councils on October 1, compared with 9,914 on January 1—a net increase of 554. It was

believed that about 500 general dental practitioners had not joined the service.—*Br. D. Jour.* Nov. 18, 1949.

School Service in Scotland

The deplorable state of the School Dental Service in Scotland is made manifest by the figures given to the House of Commons by the Secretary of State for Scotland. These show that each dental officer is responsible for approximately 7,600 children, there being 100 whole-time officers and some six part-timers for a school population of 781,294. Only 35 per cent of the children were inspected and 69 per cent of those were found to require treatment.

The Penman Report

The following is an excerpt taken from this Report: "Most dentists are working longer hours than is comfortable, or than would be good for them if continued for too long a period, and many of them are working more quickly than they would normally. These conditions have been forced upon them by the influx of work which has resulted from the expanded Health Service. As a body, they have been trying to cope with the difficult problem of keeping pace with demand without loss of efficiency and, as a body, the working party thinks they should have received more gratitude and less adverse criticism than has actually been the case.

"Moreover, there is little hope of an early improvement, even if demand should lessen in certain directions. It cannot be doubted that the present volume of work is held down by the inability of the dentists to do any more, and, as was indicated in the Teviot Interim Report, it will probably be many years before there is any appreciable increase in the number of dentists."

Girl of 3 Gets False Teeth

A girl just three years old has been fitted with dentures under the National Health scheme. She is, say the authorities, the youngest in Britain. Her mother, the wife of a soldier, said last night that Anne has no difficulty with the dentures and can chew anything. And, as if to prove it, Anne promptly

started to bite an apple.—*Daily Express*, Nov. 14, 1949.

The Health Service and Private Practice

The National Health Service is founded on the principle that free treatment is to be available to all those who apply for it but that no one, whether patient or professional man, should be compelled either to accept or give treatment under it. Doctors and dentists who accepted service in the general medical and dental services were deliberately left free to engage in private practice and to accept fees from patients who preferred to continue the old doctor or dentist-patient relationship rather than avail themselves of the offer of free treatment in the Health Service. This freedom was, as was foreseen, limited in practice, on both sides, by economic considerations. The extent to which it has operated can be judged by the facts that the number of persons enrolled on doctors' lists amount to 95 per cent of the population and that, according to the Report of the Penman Committee, only 5 per cent of the time of dentists in the general dental service who replied to the questionnaire issued by the Committee was devoted to treating private patients. Results such as these might well be held to be a triumphant justification of the soundness of the principle involved. They certainly provide none for the proposal put forward by Mr. Baird in the House of Commons that dentists in the general dental service should be prohibited from accepting fees from private patients. On the other hand it is abundantly clear that if the amendment had been accepted, and dentists had been presented with the sharply defined alternatives of giving their whole time to work under the service or to private practice, the result would have been to reduce the amount

of treatment available under the scheme, whereas, presumably, Mr. Baird desires to see it increased.

We hold no brief for those dentists in the general dental service who, having time available, refuse to give emergency treatment for the relief of pain under the scheme. The question at issue here is, however, one of social rather than professional ethics. A member of one of the healing professions is under an obligation to alleviate pain and suffering but this does not extend so far as to make it obligatory on him to give the required treatment under any particular scheme. So long as the practitioner either carries out the necessary treatment or, if he is unable to do so, gives the patient some indication as to whom the latter can apply for treatment, he has fulfilled his professional obligation.

A dentist in the service, equally with one in private practice, has a right to refuse to accept any particular patient. The exercise of this right must inevitably cause some measure of hardship. The considerate practitioner will do, and is doing, all he reasonably can to reduce the number of cases of hardship to the minimum. He has however the right, which amounts almost to a duty, to safeguard his own health—and hence his usefulness to the community—by limiting his hours of work. He has, too, the right to decide how many of those hours shall be devoted to practice in the Health Service and how many to private practice, and he would be a bold man who would presume to decide for a fellow practitioner how his time should be divided up so as to enable him to be of the greatest service to his patients. Private patients, after all has been said, are as much members of the public as those who make use of the Health Service.—Condensed from Editorial in *Br. D. Jour.* November 4, 1949.

GENERAL NEWS

Report on Dental Research

22 November, 1949.

The Associate Committee on Dental Research of the National Research Council held its 10th regular meeting in Ottawa 17-18 October, 1949, under the Chairmanship of Dr. R. G. Ellis, Dean of the Faculty of Dentistry, University of Toronto.

Members attending this meeting in addition to the Chairman included:

Dr. H. K. Box
Dr. E. Charron
Dr. J. B. Collip
Dr. M. H. Garvin
Dr. A. W. Ham
Dr. C. J. Mackenzie

Dr. R. M. McDougall
 Dr. J. J. Rae
 Dr. D. L. Thomson
 Dr. E. M. Wansbrough

Mr. S. J. Cook, of the National Research Council is *Secretary* of the Committee.

There were also present by invitation four of the Committee grantees (or their research fellows) who had been asked to present their reports in person. These were:

Dr. J. S. Bagnall
 Mr. D. R. Christie
 Dr. W. J. Linghorne
 Dr. G. H. W. Lucas

The purpose of the meeting was to receive interim reports from the various grantees whose research projects are being supported financially out of funds provided by the Committee. Each grantee is required to make a mid-year report and a final report on his project. These reports enable the Committee to assess the value of the work being done and to determine whether the project should continue to receive support.

Dr. J. S. Bagnall, Dean of the Faculty of Dentistry, Dalhousie University, Halifax, N.S., has had a small grant from the Committee for several years. He has been preparing a comprehensive bibliography on caries research and at this meeting of the Committee he presented a summary entitled "Trends in Caries Research" which was supported by a selected bibliography. This brief report is being printed for general distribution.

Dr. Bagnall also submitted his complete bibliography, a three-volume typewritten manuscript of 1175 pages that will be invaluable as a reference in dental libraries. The Committee is looking into the matter of publishing Dr. Bagnall's bibliography and an announcement regarding this subject will be made at a later date.

A complete list of the projects for which grants have been made by the Associate Committee on Dental Research since its inception in 1945, is given hereunder, with the project number, name and location of grantee, title of project, and the amount of the award made for the current year, 1949-50.

List of Projects Supported by the Associate Committee on Dental Research

Project No.	Name	Title	Amount of Grant 1949-50 \$
DR 1	Dr. J. J. Rae, Faculty of Dentistry, University of Toronto	An investigation of the chemical mechanisms involved in decrease of dental caries by fluorides.	1,000.00
DR 2	Dr. G. H. W. Lucas, Faculty of Dentistry, University of Toronto.	A study of alveolar oxygen tension and blood oxygen content during nitrous oxide-oxygen anaesthesia.	325.00
DR 3	Dr. H. K. Box, Faculty of Dentistry, University of Toronto.	A study of microorganisms found in periodontal pockets and dental caries as revealed by the electron microscope.	100.00
DR 4	Dr. H. K. Box, Faculty of Dentistry, University of Toronto.	Periodontal packs.	Project completed.
DR 5	Dr. R. L. Twible, Faculty of Dentistry, University of Toronto.	Denture base materials.	Project completed.
DR 6	Col. E. M. Wansbrough, Canadian Dental Corps.	To study the effects of altitude acceleration and deceleration on oral tissues.	No grant required.
DR 7	Dr. J. S. Bagnall, Faculty of Dentistry, Dalhousie University.	Investigation and critical report on dental caries research.	75.00
DR 8	Dr. A. D. A. Mason, Faculty of Dentistry, University of Toronto.	D.M.F. caries incidence in Brantford children.	Project completed.
DR 9	Dr. O. J. Walker, Department of Chemistry, and Dr. H. R. MacLean, Department of Dentistry, University of Alberta.	An investigation of the effects of certain chemicals on materials in appliances used in prosthetic dentistry.	300.00
DR 10	Dr. G. M. MacDonald, Queen Mary Veterans' Hospital	Facial prostheses of vinyl resins.	Project completed.
DR 11	Dr. R. J. Godfrey, Faculty of Dentistry, University of Toronto.	An anatomical, histological and physiological study of the temporo-mandibular joint.	Project completed.
DR 12	Dr. A. E. R. Westman, Ontario Research Foundation.	Investigation of cements for methyl methacrylate inlays.	4,000.00 (includes DR 21 and DR 25)

<i>Project No.</i>	<i>Name</i>	<i>Title</i>	<i>Amount of Grant 1949-50 \$</i>
DR 13	Dr. M. Doreen Smith, Department of Food Chemistry, University of Toronto.	A study of methods of fluorine analysis to be applied to extracted teeth from people living in different parts of Ontario.	1,475.00
DR 14	Dr. M. Doreen Smith, Department of Food Chemistry, University of Toronto.	Fluorine analysis of water and food samples from different areas in Ontario collected and studied in relation to incidence of dental caries.	Project completed.
DR 15	Dr. Norma Ford Walker, Department of Zoology, University of Toronto.	A comparison of the patterns of eruption of the deciduous teeth in man with rates of growth of the dental arches.	2,500.00
DR 16	Dr. C. H. Best, Banting and Best, Department of Medical Research University of Toronto.	In vivo studies of certain fungus-like micro-organisms found in periodontal disease.	Project completed.
DR 17	Dr. R. F. Shaner, Department of Anatomy, University of Alberta.	An investigation of the effects of materials used in operative dentistry on the vital pulps of teeth.	Project discontinued.
DR 18	Dr. H. K. Box, Faculty of Dentistry, University of Toronto.	Experimental artificial production of dental caries in vitro.	2,078.80
DR 19	Dr. J. K. W. Ferguson, Faculty of Dentistry, University of Toronto.	A comparison of local anaesthetics for conduction block.	350.00
DR 20	Dr. Jules Thébaud, Faculty of Dental Surgery, University of Montreal.	Improvement of sub-gingival curettage and gum resection techniques.	750.00
DR 21	Dr. A. E. R. Westman, Ontario Research Foundation.	Investigation of repair techniques for methacrylate dentures.	(See DR 12)
DR 22	Dr. C. H. Best, Banting and Best, Department of Medical Research, University of Toronto.	An investigation of the mechanism of repair of the supporting structures of the teeth.	2,400.00
DR 23	Dr. C. P. Leblond, Department of Anatomy, McGill University.	Entry of phosphate and carbonate salts into teeth as shown with the help of radio-phosphorus and radio-carbon.	2,200.00
DR 24	Dr. C. H. M. Williams, Faculty of Dentistry, University of Toronto.	The effects of hard and soft diets on the supporting structures of the teeth.	3,080.00
DR 25	Dr. A. E. R. Westman, Ontario Research Foundation.	Investigation of the use of methylmethacrylate for direct intra-oral fillings.	(See DR 12)
DR 26	Dr. R. E. Moyers, Faculty of Dentistry, University of Toronto.	Measurement of physiological forces in the mouth.	1,300.00
DR 27	Dr. J. W. Abbiss, Department of Pathology and Dr. A. G. Nutlay, Faculty of Dentistry, Dalhousie University.	A histological study of tooth germ development both intra- and extra- alveolar with a survey of pathological changes in the developing tooth.	1,000.00
DR 28	Dr. O. J. Walker, Department of Chemistry, and Dr. H. R. MacLean, Department of Dentistry, University of Alberta.	Determination of small amounts of fluorine by means of the photo-electric colorimeter.	1,000.00
DR 29	Dr. M. Doreen Smith, Department of Food Chemistry, University of Toronto.	Biological absorption of fluorine.	1,500.00
DR 30	Dr. N. Ford Walker, Department of Biology, University of Toronto.	Study of closure space following premature loss of deciduous teeth.	1,800.00

Dental research fellowships ranging in value from \$1,500 to \$2,500 per annum are now being offered by the National Research Council on the recommendation of the Associate Committee on Dental Research. Candidates must be graduates of dental schools approved by Council, and resident in Canada.

The \$1,500 fellowships are open to graduates with high academic standing and at least one year's post-graduate work. Graduates with research experience may be granted fellowships of \$1,600 to \$2,500, the exact amount depending on the candidate's training and achievement in an original research project.

The fellowships will not be awarded for practical training purposes in the clinical branches of dentistry but only for advanced research training in one of the sciences basic to dentistry.

The next meeting of the Committee will be held in February, 1950. Applications for assistance under the Associate Committee on Dental Research are received up to February 1st, and will be considered at the next meeting. Enquiries regarding any phase of the work of the Committee should be directed to the Secretary of the Committee, Mr. S. J. Cook, National Research Council, Ottawa, Ontario.

New Secretary for Council on Dental Therapeutics

Dr. J. Roy Doty, of Chicago, has been appointed to the position of secretary of the Council on Dental Therapeutics of the American Dental Association. Dr. Doty succeeds Dr. Donald A. Wallace who resigned as secretary of the Council to accept a position as assistant research manager of the Pepsodent Division of Lever Brothers Company. Dr. Doty will also continue as director of the A.D.A. Bureau of Chemistry, a post he has held since 1948.

Puppet Show Receives Blow in Oregon

The Portland Public Schools have cancelled plans with the Good Teeth Council for the showing of their puppet show in the Portland elementary schools because the Good Teeth Council recommended the use of chewing gum as a routine measure for the care of teeth and because chewing gum is a confection with a high sugar content for its appeal, and may thus contribute to dental caries. And because the reference to chewing gum constitutes an endorsement of commercial products entirely out of place in professional educational material, the Council on Oral Health feels that the script for the puppet show should be deleted of all reference to chewing gum and the illustrated booklets be not distributed as long as they contain any reference to chewing gum or any other confection containing a high sugar content.

Officers of A.D.A.

At the 90th Annual Meeting of the American Dental Association held in San Francisco in October, the following officers were elected:

President—Dr. Philip E. Adams of Boston.

President-elect—Dr. Harold W. Oppice of Chicago.

General Secretary—Dr. Harold Hillenbrand of Chicago.

A.D.A. Budget Adopted

A total of \$1,295,563 in appropriations for the operation of Association agencies during 1950 was budgeted by the House of Delegates. Income for next year was estimated at \$1,304,500, leaving an anticipated surplus of \$8,937. A proposal of the 13th district state dental associations that annual dues be increased from \$12 to \$20 was postponed for consideration at the 1950 meeting.

Alaska Given Charter in A.D.A.

A new constituent society in the American Dental Association was created for the Territory of Alaska and 30 Alaskan dentists were accepted as charter members of the new A.D.A. unit by the House of Delegates at the San Francisco meeting. A total of 514 dentists was elected to life memberships, approximately 100 dentists from 18 foreign nations were admitted as affiliate members, and three non-dentists were admitted as associate members.

IN MEMORIAM

Dr. Fritz Linnert of Nuremberg, a dentist of international repute, died on October 27, 1949. Of him Dr. J. Menzies Campbell, 14, Buckingham Terrace, Glasgow, W.2., writes:

From 1923 to 1933 he was Senior President of the German dentists. In the latter year, he was, however, deposed by order of the Nazi Government.

When the war ended, Linnert decided to devote himself to reorganizing, and uniting, the German dental profession. His friends,

among them, Dr. F. H. Witt, persuaded him again to accept the office of Senior President; and this, he held until his death.

Dr. Linnert's vision was not circumscribed. In fact, duty impelled him to fill the office of Deputy in the Diet of Bonn, which conferred upon him the important position of President of the Commission of Public Health.

A great loss to the dental profession, national and international, Dr. Linnert was, in 1930, President of the Commission of Hygiene

IN MEMORIAM

of the International Dental Federation: where his wisdom and sincerity were fully recognized by all his colleagues.

In July, 1949, he was present at the Congress of *La Societe Suisse d'Odontologie* at Interlaken. His speech at this year's meeting of the German dentists at Wiesbaden was probably one of his finest efforts. His memory will live, wherever dentistry is practised.

Fenwick C. Bonnell of Saint John, New Brunswick, died December 3 following a lengthy illness. He was graduated from Tufts Dental College in 1906 and had practised in Saint John for forty-three years.

He was 1st Vice-President of the Dominion Dental Council and Chairman of the Board of Examiners of the New Brunswick Dental Council. He had been a member also of the Canadian Dental Educational Council.

Dr. Bonnell was a past president of the New Brunswick Dental Society; was a member of the staff of the General Hospital as Dental Surgeon since 1924, and consultant since 1943. He was an officer of the Canadian Dental Corps in the First World War and was also an ardent fisherman.

He was an Anglican and attended the Mission Church.

Dr. Bonnell is survived by his widow, one son Dr. H. F. Bonnell of Saint John, and two brothers.

Ralph Reynolds Dalglish of Bridgewater, Nova Scotia died suddenly on November 19 at Sydney, N.S. where he had practised since graduation. "Dal", as he was known by his many friends, was graduated from Dalhousie in May, 1924. His excellent record in college was a prelude to the contribution which he was later to make to his profession. He was an early advocate of the great need for im-

proved dentistry for children and gave a number of clinics on this, and other subjects.

Dr. Dalglish is survived by his widow, a son and a daughter.

The funeral was held at Bridgewater on November 22, 1949.

C. W. Parker of Regina, Saskatchewan, died December 4. He was born in the province of Nova Scotia and was graduated from the Dental College, University of Dalhousie in 1914. He moved directly from College to Regina, Sask., and for many years was associated with the late Dr. W. D. Cowan. He was Past President of the Regina Dental Society and the Western Canada Dental Society, and had served on committees of the Canadian Dental Association.

Not only was Dr. Parker interested in his profession, but was at one time a Grand Master of the Knights of Pythias; a strong worker in Metropolitan United Church, and had taken an active part in politics.

F. E. Foster of Wiarton, Ontario, aged 65, was accidentally killed on the highway by a rural hydro truck on December 5.

Angus C. Sinclair of Campbellton, N.B., aged 48, died in November. He was graduated from Mount Allison and Dalhousie Universities and practised in Stellarton, N.S. for four years before returning to Campbellton in 1936.

Walter McNally of London, England, aged 66, died November 22.

Dr. McNally was graduated from the University of Toronto and practised in Winnipeg for some years before serving in the First World War, following which he commenced practise in London.

Got any river they say isn't crossable? Got any mountains that can't be cut thru? We specialize in the wholly impossible—Doing things "nobody ever could do!"

—B. Braley

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

JANVIER, 1950

No 1

LA CARIE DENTAIRE

*Les facteurs qui contribuent à la produire et leur inter-action**

par H. CHARETTE, D.D.S., Montréal

En abordant cette étude, il faut d'abord convenir que toute la question de la carie dentaire est encore là devant nous, presque en son entier.

Depuis plus de soixante ans, l'étude du problème a progressé lentement. Dans l'état actuel de nos connaissances, assez peu de données positives nous permettent d'entrevoir une solution prochaine, tant au point de vue théorique que pratique.

Le cas est en tous points semblable à celui de bien d'autres maladies, que la science médicale n'a pas encore maîtrisées.

THEORIES SUR LA CARIE

Après de très laborieuses recherches, guidé, sans doute, par les grandes découvertes de cette époque, Miller, vers 1880, énonça sa fameuse théorie de la relation directe entre les propriétés acidifiantes des bactéries de la bouche, et le processus de la carie.

Certains auteurs ont appuyé, par leurs recherches subséquentes, le bien-fondé de cette hypothèse. Mais, d'autres chercheurs ont infirmé la valeur de ces conclusions en observant des faits sur lesquels, ils ont édifié des théories différentes.

Acidogènes

Miller¹ avait déjà énoncé que la carie dentaire était une décalcification de l'émail et de la dentine par l'acide, produit de

fermentation des amidons et des sucres, en présence de certains micro-organismes.

Goadby² dans une étude sur la flore buccale, où il note déjà des bactéries de genres différents, place au premier rang les espèces acidogènes. Elles sont, dit-il, dans tous les cas, les initiatrices du processus de la carie.

A cette école, répondit une autre, présentant la théorie de la carie par protéolyse.

Protéolyse

Bernhard Gottlieb³ a exprimé l'opinion que la carie dentaire est une dégradation de la substance protéique de l'émail s'étendant en profondeur. L'envahissement de la trame organique, qui se nécrose par la suite, constitue le processus de la carie.

Harry Frisbie⁴ écrit encore, que la carie est essentiellement une dégradation de la matière organique du tissu de l'émail par des bactéries genre cocci, bien plus qu'une simple décalcification par acide avec destruction des sels organiques de l'émail. Par des méthodes histologiques, il a démontré la présence de bactéries sphéroïdes dans la matière organique de l'émail.

FACTEURS GENERAUX

De nombreux facteurs généraux peuvent intervenir au cours du processus de la carie dentaire.

* Travail présenté à un séminaire de l'Ecole d'Hygiène, de l'Université de Montréal, le 10 mars 1949.

Actuellement, les faits cliniques sont trop peu consistants pour nous permettre d'établir des relations certaines.

Les recherches en ces matières n'en sont encore qu'à leur début. Rien encore ne justifierait la moindre élaboration de principe, si élémentaire soit-elle.

Cependant, il faut noter certaines causes prédisposantes très importantes. C'est de la période de la formation de la dent que dépendra la valeur réelle de cet organe.

Depuis l'instant où se différencient les cellules adamantoblastes et odontoblastes, qui élaborent leurs tissus propres, jusqu'au moment de la formation complète de l'émail, c'est-à-dire, jusqu'à l'éruption de la dent, se confectionne la qualité d'émail, la valeur des dents que nous aurons en bouche.

Le degré de perfection de l'émail détermine la résistance que la dent offrira plus tard aux divers facteurs locaux que nous verrons tantôt.

Nutrition

Puisque la diète doit procurer à l'organisme tous les éléments de vie nécessaires, on imagine que les dents doivent en subir les effets, bons ou mauvais. Il est même permis de croire que si nous connaissions et appliquions les principes d'une alimentation naturelle parfaite le problème de la carie dentaire n'existerait peut-être pas. L'exemple des Eskimos et de quelques autres peuplades primitives semble prouver que la carie dentaire est la rançon d'une alimentation déséquilibrée imposée par notre civilisation.

On connaît aujourd'hui l'influence des facteurs vitaminiques sur la formation des tissus de la dent. Toutes les vitamines sont des facteurs de croissance, la vitamine-A en particulier.

Une carence en vitamine-C⁶, chez les animaux, cause la dégénérescence de la pulpe et de la dentine, et Howe lui aurait attribué un effet marqué sur la décalcification de l'émail.

On a démontré que la vitamine-D influence la formation de la dent, rend celle-ci moins résistante à la carie.

Son rôle à l'endroit du calcium et du phosphore ajoute encore à son importance. Ces sels minéraux, puisque nous

avons affaire dans l'émail à un phosphate tricalcique, sont également indispensables. Et, c'est la vitamine D, qui est l'agent régulateur de ces éléments dans l'organisme. On voit combien calcium, phosphore et vitamine-D sont précieux. Sitôt donc, que le métabolisme est faussé, on peut présumer le degré d'hypoplasie dont la dent sera marquée. Le tissu dentaire en évolution peut être le siège de troubles provenant d'une carence en vitamine-D, tout comme le tissu osseux, quand apparaît le rachitisme.

Maladies générales

Certaines maladies qui affectent la stabilité du système nerveux, le bon fonctionnement des glandes endocrines et le métabolisme général, sont des facteurs capables d'influencer partiellement la susceptibilité d'un individu à la carie.

Actuellement, aucune donnée certaine ne semble déterminer à quel moment et à quel degré la portée de ces facteurs peut intervenir.

Hérédité

Il semble que l'on puisse attribuer encore à l'hérédité certaines influences. On croit possible que la résistance⁶ à la carie chez l'homme soit héréditaire. Des auteurs attribuent à des systèmes endocriniens semblables, l'observation⁷ que les filles et leurs mères présentent souvent les mêmes défauts dentaires. La forme⁸, la disposition et l'occlusion des dents sont aussi des traits, dont on rend encore l'hérédité responsable.

Toutes ces causes indirectes, si imprécises soient-elles, n'en fournissent pas moins, assurément, des conditions favorables ou défavorables à la denture. Elles offrent une valeur de terrain que nous allons maintenant retrouver en bouche, en repassant les facteurs locaux, tels qu'ils se présentent généralement.

FACTEURS LOCAUX

Salive

Tous les auteurs ont toujours attaché une grande importance à la salive et l'ont patiemment étudiée. On convient généralement que 6.8 est le pH salivaire normal. Certains⁹ précisent que 6.6 est le pH plus élevé où l'émail puisse être dissout.

On affirme¹⁰ aussi qu'il existe une relation entre le pH salivaire et le taux de carie. Cependant, d'autres font encore remarquer que dans la même bouche il y a écart entre le pH du milieu, où se situe la carie, et celui des régions, qui en sont indemnes.

Divers facteurs peuvent contribuer à faire varier les résultats d'analyse. Le taux de calcium et de phosphore dans la salive est très variable. La présence¹¹ d'ions de phosphore et de calcium maintient l'équilibre vers l'alcalinité, en neutralisant la production d'acide. On a démontré que les personnes faisant peu ou pas de carie, avaient une salive plus saturée de phosphate de calcium que d'autres aux caries désordonnées. Dans l'état actuel des recherches¹², l'apport alimentaire de calcium et de phosphore semble n'avoir que très peu d'influence sur la teneur de ces sels dans la salive.

La mastication¹³ en provoquant une salive plus abondante dilue l'acide produit localement. Mais, si les conditions de la bouche sont telles que la production d'acide devient presque constante, le pouvoir tampon de la salive est alors dépassé, et il n'y a plus d'effet neutralisant efficace.

Morphologie

L'arrangement des dents qui favorise la rétention de débris alimentaires est un autre point important. Certaines régions demeurent complètement à l'abri des heureuses influences de la salive. Quel que soit le flot salivaire et la qualité de sa composition, l'état de stagnation, qui prévaut alors, permettra à la flore buccale d'y séjourner avec toute liberté d'action.

La morphologie de la dent ajoute encore à ces difficultés. Ses sillons (points et fissures) viennent s'unir en joints plus ou moins parfaits; sa surface d'émail présente souvent une structure favorable à la rétention des aliments. Les points de contact normaux faussés par une mauvaise articulation ont les mêmes conséquences.

Histologie

La structure histologique des tissus de la dent comporte elle aussi des aspects non négligeables. La résistance de la dent est diminuée quand, durant sa formation,

ses tissus ont souffert même momentanément d'une carence dans l'apport de matériaux. La dent hypoplasique est une proie facile à la carie dentaire. Toute solution de continuité sur la surface de l'émail est une porte d'entrée à l'invasion microbienne. Nous avons vu la dent sous ses différents aspects et considéré les variations de la salive qui l'environne. Nous examinerons maintenant comment ce milieu est conditionné par le jeu normal de facteurs exogènes, au premier rang desquels se place la flore buccale.

Flore buccale

Acidogène—

Des bactéries qui la compose, mentionnons d'abord la plus connue, le lactobacille acidophile à qui, aujourd'hui, on concède surtout une valeur d'incidence¹⁴. C'est à la phase initiale de la carie que l'on reconnaît surtout son rôle nocif. Dans les bouches où il y a caries, on note¹⁵ chaque fois sa présence. La tendance¹⁶ ou la résistance à la carie est toujours en rapport avec la présence ou l'absence de lactobacilles dans la bouche. On affirme que la seule analyse de la salive, quant aux nombres de lactobacilles présents, est un indice sûr du taux de la carie. Il en est de même du streptocoque odontoliticus qu'on estime même plus acidogène à certains points de vue. On a émis l'opinion que ces bactéries agissent en symbiose.

Protéolytique—

A ces bactéries, dont je n'ai mentionné que les deux plus importantes espèces, ajoutons-en d'autres que l'on peut aussi considérer comme acidogènes, mais agissant également par protéolyse:—le sarcina lutéa, le streptocoque viridans, le B. Subtilis et certains staphylocoques.

Enfin quelques-uns dont l'action est spécifiquement protéolytiques, les actinomyces et les leptotrix. Ces dernières formes plus évoluées s'entrelacent comme de véritables treillis s'agrippant à la dent, et envoient même des prolongements dans les lamelles dentaires et forment pour ainsi dire, le canevas de la plaque dentaire.

Plaques dentaires

Quelles que soient les théories émises par les différentes écoles, qui se partagent le champ de la recherche, c'est pour toutes la flore bactérienne, qui est l'agent causal de la carie. C'est pourquoi aussi, de part et d'autre, on attribue à la plaque dentaire un des rôles les plus importants dans la production de la carie. Elle consiste¹⁷ en une natte épaisse et poreuse capable d'absorber une quantité considérable de débris alimentaires, de cellules épithéliales et de liquide. Les bactéries¹⁸, facteurs déterminant des lésions, constituent à peu près la moitié de son volume total. La situation habituelle où on la retrouve trop souvent en fait un milieu idéal de culture. Elle est logée en des endroits où la salive ne peut en empêcher la formation, ni plus tard en neutraliser les effets, et elle adhère fermement sur la surface de la dent.

Sucres

La présence d'hydrates de carbone, qu'on y retrouve, met en cause la diète souvent trop généreuse en ces substances. On sait que la ptyaline et les amylases de la salive les dégradent en sucres.

On sait de plus qu'en présence des sucres, pour qu'il y ait production d'acide¹⁹, il faut encore des systèmes enzymatiques appropriés; les bactéries les fourniront. Donc, pourvu que les bactéries forment les enzymes indispensables et trouvent le substrat convenable, nous avons une rapide production d'acide.

Hygiène Buccale

Tous ces facteurs, dont nous venons de voir l'action se conjuguer si intimement pour la perte des dents, font de l'hygiène buccale plus qu'un souci de propreté individuelle déjà fort recommandable.

Les soins professionnels dentaires s'imposent pour faire disparaître convenablement plaques dentaires d'apparences variées et dépôts de calculs.

Notons, ici, que les bouches où le tartre se forme plus abondamment sont souvent celles où les caries sont moins fréquentes. Il faut un pH salivaire normal, ou à tendance alcaline, pour qu'il y ait formation de dépôts. La valeur tampon de

la salive joue alors normalement et les caries sont moins nombreuses.

Si l'ablation du tartre n'est pas faite soigneusement et régulièrement l'irritation des tissus nous donnera une des formes variées de gingivite. Que cet état pathologique persiste, nous aurons ensuite successivement destruction de la membrane péri-dentaire, dégénérescence des tissus environnants ou périodontoclasie, enfin pyorrhée et perte des dents.

Il faut ajouter ici les obturations faites à la hâte, mal finies et non contrôlées et certaines pièces défectueuses de prothèse. Tous ces travaux, s'ils ne sont pas judicieusement élaborés, par la retention des aliments qu'ils favorisent, seront la cause de nouvelles lésions.

Enfin, les pâtes dentifrices trop abrasives, une manipulation maladroite de la brosse à dent peuvent dans une certaine mesure provoquer de petites caries gingivales par érosion des tissus.

FACTEURS INHIBITEURS

Pour atténuer l'impression que cet exposé a pu créer, permettez que je dise quelques mots de certaines substances qui, jointes à tous les autres moyens thérapeutiques connus et de pratique courante, aideront, espérons-le, à combattre plus efficacement la carie dentaire.

Tryptophane

Voici, ce que l'on sait aujourd'hui du tryptophane²⁰ en regard de la carie dentaire. Dans les bouches, où les caries foisonnent, la salive hydrolyse les amidons très rapidement avec production d'acide; dans les autres, cette réaction chimique se fait très lentement. Parce que l'on avait remarqué qu'une diète, où les hydrates de carbone avaient été remplacés par des protéines, avait diminué les caries, on fit appel à des acides aminés, lesquels dérivent des protéines, et en particulier au tryptophane. Après en avoir fait ingérer à des patients faisant beaucoup de caries, on a remarqué que leur salive devenait semblable à celle des patients faisant peu ou pas de carie. Des recherches nombreuses sont encore à faire pour prouver à quel point le tryptophane ou des dérivés agissent sur les amylases

salivaires pour en modifier et ralentir le rôle normal. On n'en connaît pas encore la composition optimum, ses effets physiologiques exacts, et on ne sait jusqu'à quel point il peut enrayer la carie dentaire.

Fluor

Le fluor²¹ est un autre élément important dans la lutte contre la carie chez les enfants. Des analyses²² ont prouvé que les dents saines contiennent plus de fluor que les dents cariées.

A la suite de plusieurs examens de contrôle dentaire, on s'est rendu compte, en les comparant à ceux faits en d'autres régions, que là où l'eau de consommation contenait du fluor, l'incidence de la carie était le tiers de celle constatée dans les villes témoins. Là où il y avait fluorose, le taux de carie était également réduit.

Partout où l'on fit les mêmes examens, on obtint les mêmes résultats, avec ce détail pratique, qu'au point de vue prévention, la concentration optimum ne devait pas dépasser beaucoup 1 ppm. sans risque de produire la fluorose (émail madré dû à l'excès de fluor).

En certains endroits, on a imaginé d'ajouter du fluor à l'eau de consommation. En 1945, la ville de Grand Rapids, Mich., en a commencé l'expérience. Le coût de l'opération est de 10 cents, par personne, par année. La même expérience est en cours au Canada, à Brantford, Ontario, la ville de Sarnia servant de témoin.

Comme nous l'avons déjà vu, la dent est de beaucoup plus susceptible à de telles influences pendant sa période de formation. D'où, il s'en suit qu'il nous faut attendre encore quelque deux ans avant de connaître les résultats, qu'apporteront ces expériences de l'eau artificiellement fluorée, dans la génération d'enfants sous observation actuellement. Des résultats provisoires font espérer en une réduction de 60% dans l'incidence de la carie.

Une autre méthode employée pour se servir du fluor comme inhibiteur de la carie, est l'application topique d'une solution de fluorure de sodium à 2%. Les

résultats obtenus de cette manière semblent donner une réduction d'au moins 40% de la carie dentaire.

On a aussi pensé à la possibilité d'employer le fluor sous forme alimentaire; aucune donnée scientifique n'a encore appuyé cette prétention.

Nos connaissances sur le mécanisme inhibiteur du fluor et son action à l'égard de la carie, ne sont pas encore établies sur les études scientifiques précises et complètes.

Vitamine K

En 1942, on s'est aperçu que la vitamine K²³ synthétique entravait l'action des enzymes et retardait notablement la production d'acide lactique, à partir du glucose, ainsi que le fait le tryptophane.

Comme on s'était rendu compte que cette substance avait un effet purement local, on imagina pour fins d'expérience de l'incorporer à de la gomme à mâcher. Après dix-huit mois de surveillance très étroite, cette tentative donna les résultats suivants: chez un premier groupe, à qui l'on avait prescrit cette gomme additionnée de vitamine K, l'on vit les nouvelles caries diminuer de 60% comparativement à d'autres groupes servant de témoins.

La vitamine K n'eut aucun effet sur les caries déjà existantes. L'on observa aucune contre-indication à l'usage de la vitamine K synthétique.

On affirme²⁴ que la réduction des caries obtenue par la vitamine K, chez les personnes qui souffrent de carie, est plus grande que ce que l'on peut attendre de l'usage du fluor dans l'eau de consommation.

Urée et ammonium

Des dentifrices mis récemment sur le marché promettent, dit-on, beaucoup. Leur pouvoir inhibiteur tiendrait à l'addition d'urée et de phosphate dibasique d'ammonium; l'urée agissant sur les plaques dentaires et le sel d'ammonium sur la flore buccale.

Des noms de belle réputation y auraient collaboré d'assez près, semble-t-il. Mais aucune revue dentaire, aucun auteur ne nous en a encore garanti la valeur et l'authenticité. Tout de même, le fluor chez

les enfants, la vitamine K, le tryptophane, ces dentifrices nouveaux et quelques autres méthodes encore à l'étude, paraissent en train d'édifier peu à peu un réseau protecteur autour de la carie dentaire.

CONCLUSIONS

Résumons cet exposé par les quelques idées générales suivantes:

Les facteurs généraux ont, certes, une importance appréciable, mais une importance de terrain.

Les facteurs locaux sont considérés comme les causes déterminantes de la carie.

Leur ensemble est si complexe qu'il semble encore impossible de tirer une conclusion satisfaisante.

Cependant, leur "inter-action" commence à être comprise, et, petit à petit, nous nous approchons de la connaissance du processus de la carie dentaire.

Enfin, quelques inhibiteurs de la carie viennent d'attirer l'attention de la profession dentaire.

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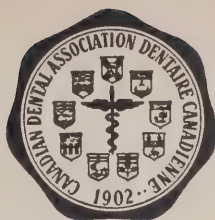
1951 est, rue Sherbrooke, Montréal

Le fluor à la portée de tous

Le docteur Francis A. Bull, directeur du service dentaire du Bureau de Santé de l'Etat du Wisconsin, après avoir étudié les statistiques de cette question, en arrive à une conclusion importante: l'incidence des caries dentaires diminue de 65% chez les individus, qui boivent de l'eau contenant du fluorure de sodium. A la réunion annuelle de l'American Dental Association, tenue à San Francisco, en octobre, le docteur Bull demanda aux délégués de ce 90e congrès de cesser leurs expériences et leurs recherches pour passer à l'action, maintenant que la valeur de cette substance est évidente. "Pourquoi ne pas lancer un vaste programme d'addition de fluorure de sodium à l'eau des aqueducs?", demanda-t-il. Les dentistes assemblés réagirent prudemment. "Nous ne voulons pas nous mettre les pieds dans les plats", dirent-ils, "il faut attendre les conclusions scientifiques des recherches actuellement en cours, avant d'établir une politique à ce sujet.

Ces enquêtes définitives peuvent prendre encore de trois à cinq ans."

Mais le docteur Bull défendait sa thèse et persistait à réclamer l'élaboration d'un projet concret pour l'addition de fluor à l'eau des municipalités. "Dans Sheboygan," dit-il "où on met du fluor dans l'eau depuis 1946, la carie a diminué de 28% dans les dents d'enfants et de 19% dans les dents des adultes. Seul le fluor est responsable de ces améliorations. Dix villes du Wisconsin font la même chose et trente autres s'équipent pour le faire. Et malgré ces démonstrations évidentes, notre Association transverse et ne veut pas prendre de chances".



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Souhaits de notre Président, pour l'année nouvelle

L'année, qui commence, apporte à chacun de nous de nouveaux espoirs, un rajeunissement de notre idéal et des résolutions neuves.

Puissions-nous, en tant que membres d'une profession de santé, essayer de rendre de plus grands services, durant 1950.

A chacun des dentistes du Canada, permettez-moi d'offrir mes meilleurs vœux et de souhaiter à tous les membres une bonne santé et beaucoup de bonheur durant toute la nouvelle année, au nom des officiers et des membres du Bureau des Gouverneurs de l'Association Dentaire Canadienne.

G. VERNON FISK,
président de l'A.D.C.

Leçons aux manufacturiers

Les événements, qui se sont déroulés ces dernières semaines, dans le domaine de la publicité des pâtes et des poudres dentifrices, devraient faire réfléchir les fabricants de ces produits, quand il s'agit de vanter auprès du public les mérites de ces nécessités d'hygiène.

Les journaux nous rapportaient récemment que le gouvernement américain a ordonné à la maison Bristol-Myers de cesser certaines réclamations publicitaires pour son dentifrice Ipana, y compris la prétention de combattre le "rougissement" de la brosse à dents.

La commission du commerce dit qu'elle est intervenue par suite de fausses représentations sur la valeur thérapeutique du dentifrice Ipana et sur le nombre de dentistes, qui le recommanderaient. La commission fédérale a spécifiquement interdit à Ipana de prétendre dans sa publicité que l'usage de cette pâte avec massage des gencives empêchera le saignement léger au brossage ou aidera à éliminer ses causes, que l'Ipana a une valeur thérapeutique pour le traitement des maladies de la bouche, des dents, des gencives et que le massage à l'Ipana stimulerait la circulation dans les gencives.

Les autorités fédérales interdisent, en outre, de prétendre dans la publicité d'Ipana que les régimes alimentaires modernes composés d'aliments mous et bien cuits ne donnent pas aux gencives assez d'exercice ou stimulation et que ces diètes ou aliments exposent les gencives à des troubles.

La condamnation de ces méthodes publicitaires pour mousser la vente de ce produit dentaire a été le résultat d'une campagne menée par l'Academy of Periodontology, qui avait soumis à ses membres tous les allégés trouvés dans les annonces d'Ipana. Ces dentistes avaient rejeté la plupart de ces prétentions, comme fausses et sujettes à tromper le public.

Il y a quelques semaines, le gouvernement canadien mettait en garde certains fabricants de poudre dentifrice à base d'ammonium. A cette occasion, notre gouvernement contestait certaines prétentions de ces compagnies, qui laissaient le public sous la fausse impression que la carie dentaire était combattue effectivement par l'usage de ces dentifrices. Le gouvernement prohibait cette publicité jusqu'à ce que des expériences sérieuses, tant "in vitro" que "in vivo", aient démontré d'une façon évidente la vérité de ces prétentions.

Ces divers actes officiels des gouvernements sont de nature à modérer l'ardeur d'autres maisons de commerce, qui font une réclame tapageuse, tant à la radio que dans les journaux, en faveur de leur produits. La profession dentaire se révolte à la lecture de certaines annonces de dentifrices, qui prétendent redonner la santé et la beauté naturelle de la denture par leur simple emploi.

Il est bon que nos gouvernements remettent à la raison ces commerçants, qui exploitent la crédulité du profane dans un but de lucre et de profits. Les dentistes sont les vrais protecteurs scientifiques de l'intégrité dentaire et se doivent de renseigner les autorités sur les exagérations et les faussetés des exploiters des populations.

Gérard de Montigny

Plan d'entraînement pour les hygiénistes dentaires, en Angleterre

Un plan d'entraînement pour former des femmes, comme hygiénistes dentaires, est en train d'être mis sur pied par le Ministère de la Santé, à titre d'expérience de leur utilité en dentisterie.

Fonctions des hygiénistes dentaires

Les hygiénistes dentaires sont des femmes entraînées à exécuter des opérations dentaires, telles que le détartrage et le polissage des dents et, en général, de nettoyer la bouche avant que le dentiste commence ses traitements. Elles montrent, de plus, aux patients à entretenir la propreté de leur bouche; cette phase de leurs activités est importante surtout chez les enfants. Les hygiénistes travaillent sous la responsabilité d'un dentiste.

La raison d'être des cours

Jusqu'à présent, il n'y a que quelques hygiénistes dentaires, en Angleterre, qui, toutes, ont été entraînées par le Service Dentaire de l'Aviation Royale, qui les considéraient comme des plus importantes au sein d'une équipe dentaire. Plusieurs de ces hygiénistes licenciées de l'Aviation Royale, ont suivi des cours post-scolaires à la Clinique Dentaire Eastman et travaillent maintenant dans des hôpitaux ou dans des cliniques locales. Les hygiénistes ont, de plus, prouvé leur valeur aux Etats-Unis, où elles ont accompli leur besogne depuis au-delà de quarante ans.

On est d'avis que des hygiénistes dentaires rendraient de grands services dans l'amélioration de la santé dentaire et, pour augmenter leur nombre, des cours d'environ une année sont à être organisés.

Cette occupation ouvre un champ d'activités nouveau pour les femmes, profession, qui demande de la dextérité, de l'habilité et du tact envers les patients. L'hygiène buccale promet d'être un fac-

teur important dans la prévention des maladies de la bouche, puisque beaucoup de personnes souffrent de déficience physique due à une bouche malade.

Salaires et avenir

Une échelle nationale de salaires est encore à venir. Entretemps, les hygiénistes peuvent envisager gagner entre £7 et £8, par semaine, pour les non-résidentes, selon la localité de l'hôpital ou de la clinique, où elles travailleront.

Toutes les hygiénistes, qui obtiendront le Certificat d'Efficacité du Ministère de la Santé, à la fin de leurs études, se verront offrir des postes dans des hôpitaux ou dans des services dentaires publics. Leur embauchement dans des cabinets privés est interdit. Cette profession prouvera son utilité avec le temps et fera partie d'une façon permanente d'un service de santé; cependant, on ne peut promettre d'emploi permanent, avant que la valeur des hygiénistes n'ait été reconnue et trouvée satisfaisante.

Détails du cours

Le premier cours est commencé depuis octobre 1949 à la Clinique Dentaire Eastman, Chemin Grays Inn, Londres, et on espère que deux cours semblables commenceront en province, en 1950.

Il consistera en 3 termes de 14 semaines, avec une semaine de congé entre chacun.

Les uniformes (gilets et bonnets) seront fournis.

Le cours est gratuit.

Les étudiantes auront à trouver leur propre logement, mais recevront une allocation de £4, par semaine, durant leur entraînement. On pourra se procurer le repas du midi, à des taux raisonnables, à la cantine de l'hôpital.



Dans le monde dentaire

Réunion annuelle de 1952

Des invitations à tenir la réunion annuelle de 1952, à Vancouver, ont été officiellement reçues de l'Association Dentaire de la Colombie Britannique et du Conseil des Chirurgiens-Dentistes de la Colombie Britannique. Le Bureau des Gouverneurs de l'A.D.C. a accepté ces invitations et la réunion de 1952 aura lieu à Vancouver.

La province du Nouveau-Brunswick augmente son octroi.

A sa réunion annuelle, l'Association Dentaire du Nouveau-Brunswick a décidé d'augmenter son octroi à l'A.D.C. à \$15.00, par année, à partir de 1950.

Décision de l'Association Dentaire de Terre-Neuve.

A une assemblée tenue le 31 octobre dernier, l'Association Dentaire de Terre-Neuve a décidé officiellement de soumettre une application à l'A.D.C. pour devenir membre, à même titre que les autres provinces. Le Président de l'A.D.C., le docteur Fisk, et le Secrétaire étaient présents à cette réunion. Les représentants officiels de notre Association furent reçus dans un esprit de pleine coopération avec l'A.D.C. La place de cette nouvelle province est assurée d'avance, puisque tous les membres de Terre-Neuve sont anxieux de collaborer et de supporter le travail de notre Association.

D'après les règlements, il est nécessaire que cette application soit présentée à la réunion annuelle de l'A.D.C., avant qu'elle soit acceptée.

La Société de Stomatologie célèbre le vingt-cinquième anniversaire de sa fondation.

La Société de Stomatologie de Québec a célébré avec éclat ses noces d'argent, samedi, le 29 octobre, au Chateau Frontenac. A cette occasion, la Société avait organisé une journée d'études, où des conférences et des cliniques ont été présentées par les docteurs A. Sloan, d'Ottawa, J. W. Morton, professeur à l'Université McGill, L. P. Bernier, professeur à l'Université Georgetown, Washington, et Ro-

land Gendron, professeur à l'Université de Montréal.

Le soir, un banquet, présidé par le docteur Viger Plamondon, président sortant de charge de la Société de Stomatologie, groupait à la table d'honneur les personnalités du monde dentaire canadien et québécois. Parmi ces invités, on remarquait Mgr Ferdinand Vandry recteur de l'Université Laval, les docteurs Vernon Fisk, président de l'Association Dentaire Canadienne, Don W. Gullett, secrétaire général de cette même association, Ephrem Vinet, président du Collège des Chirurgiens-Dentistes de la Province de Québec, Ernest Charron, doyen de la Faculté de Chirurgie Dentaire de l'Université de Montréal, D. P. Mowrey, doyen de la Faculté de Chirurgie Dentaire de l'Université McGill, Charles Vézina, doyen de la Faculté de Médecine de l'Université Laval, Emile Beaulieu, président-fondateur de la Société de Stomatologie.

Ont adressé la parole à ce banquet: Mgr Vandry, les docteurs Plamondon, Ratté, Hamel, Fisk, Vinet, Mowrey, Charron, Gullett.

La teneur des discours portait sur l'événement du jour et sur la fondation prochaine d'une Faculté Dentaire à l'Université Laval.

La Société Dentaire de Joliette.

A sa dernière réunion, tenue le 9 novembre, la Société Dentaire de Joliette a procédé à l'élection d'un nouvel Exécutif. Le résultat de cette élection fut le suivant: Président, P.-E. Perreault, L'Assomption; Vice président, Paul Dionne, Joliette; Secrétaire, Paul Cabana, S.-Gabriel de Brandon; Trésorier, Joffre Pouliot, Joliette; Aviser, L. L. Benny, Joliette. Le conférencier invité à cette assemblée était de docteur Gérard de Montigny, professeur agrégé à l'Université de Montréal, qui a traité du "Traitement des infections dentaires".

La carrière de dentiste.

Dans le seul but d'éclairer les parents, les jeunes gens et leurs conseillers dans l'appréciation juste de la carrière du dentiste, le Comité des Relations Publiques de l'A.D.C. a préparé un pamphlet de renseignements sur cette question. Notre Association n'a pas à recruter des étudiants, ni à augmenter le nombre des inscriptions dans nos Ecoles dentaires. Elle croit, cependant, qu'un public con-

venablement éclairé appréciera et demandera d'avantage des services dentaires, dans l'avenir; de plus, qu'une jeunesse en bonne santé et munie des qualifications requises considérera la Dentisterie comme carrière; ces jeunes gens, en outre, devront être portés vers le travail scientifique et désirer servir l'humanité dans une besogne qui donne à son homme une rémunération convenable et une grande satisfaction professionnelle. L'A.D.C. espère que cette brochure aidera un grand nombre de jeunes gens et de jeunes filles à faire judicieusement le choix d'une carrière.

On peut obtenir une copie de cette publi-

cation, gratuitement, en s'adressant au Secrétaire, 211 rue Huron, Toronto. Pour de plus grandes quantités, un tarif sera fixé.

Nécrologie.

Dans le cours de novembre est décédé le docteur Ernest Lapointe, à l'âge de 56 ans. Ce confrère avait fait ses études au séminaire de Ste-Thérèse et à l'Université de Montréal. Outre son épouse, le Dr. Lapointe laisse deux frères, le docteur Wilfrid Lapointe et M. Horace Lapointe; une soeur, Mme Carol Laurin, Nos condoléances à sa famille.



Vingt-cinquième anniversaire de la Société de Stomatologie

Photographie du groupe de dentistes, qui ont pris part à la célébration du vingt-cinquième anniversaire de la fondation de la Société de Stomatologie, à Québec, en octobre dernier. Sur la première rangée, de gauche à droite, on voit entre autres:

Mm. les docteurs Rémy Langlois, Québec, D. P. Mowry, doyen de la Faculté Dentaire de l'Université McGill, Eudore Dubeau, Ephrem Vinet, président du C.C.D. de la P. de Qué., Louis Bernier, secrétaire de la Société, Viger Plamondon, président de la Société, Vernon Fisk, président de l'Association Dentaire Canadienne, Don W. Gullett, secrétaire de l'A.D.C., A. Slone, Ottawa, Philippe Hamel, Québec, W. Rooney, représentant du Dép. des Vétérans, etc.



Eminent dentiste à l'Université de Montréal

Sous les auspices de la Fondation Kellogg, la faculté de chirurgie dentaire de l'Université de Montréal a offert, durant le mois de novembre, à un groupe de dentistes canadiens un cours de perfectionnement en chirurgie buccale et en anesthésie. Ce cours était sous la direction du Dr Harry M. Seldin, de New York, chirurgien buccal de renommée internationale. Le Dr Seldin était accompagné du Dr Frederick W. Clement, de Toledo, Ohio, président du comité d'anesthésiologie de l'Association Médicale Américaine. Sur cette photo prise avant une leçon, nous remarquons, de gauche à droite: les docteurs Gérard de Montigny, professeur à la faculté, Clement, Ernest Charron, doyen de la faculté, et Seldin.

Cours post-scolaire de Périodontie, à l'Université de Montréal

La faculté de Chirurgie Dentaire de l'Université de Montréal offre aux praticiens généraux un cours de périodontie pratique d'une semaine, du 6 au 11 février. Ce cours sera sous la direction du docteur Roland Gendron, diplômé du Service de Périodontie du New York University, et portera sur des problèmes d'ordre pratique, tels qu'ils se présentent, chaque jour, dans les cabinets dentaires.

Les frais d'inscription sont de cinquante dollars. On s'inscrit en écrivant au Doyen, Faculté de Chirurgie Dentaire, 2900 Boul. Mont-Royal, Montréal.

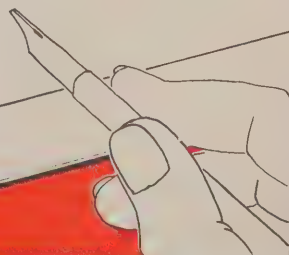
MEMO

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A Reminder
to attend the Annual Meeting
of the Canadian Dental Association
in cooperation with the Ontario Dental
Association, Royal York Hotel, Toronto.
These are **RED-LETTER DAYS**
for Dentistry and shouldn't
be missed



Mark these dates in your appointment book NOW!

★ C.D.A. AND O.D.A. MEETING ★ MAY 14-17 ★



R. S. LANGSTROTH, D.D.S., D.D.P.H.
Fredericton, New Brunswick

Director Dental Health, Dept. Health & Social Services,
Fredericton, September 1, 1948.

L.D.S., D.D.S. University of Toronto 1929.
D.D.P.H. University of Toronto 1949.

Past Master Albion Lodge No. 1, AF & AM.
Past President of Gyro Club, Saint John.
Past President Saint John Dental Society.

Member of Council N.B. Dental Society for several years.
September 1939 to February 1946 Lt. Col. E.D.

O.C. No. 27 C.A.D.C. M.D. No. 7 Canada.

O.C. No. 16 Base Dental Company, C.A.D.C. England.

O.C. No. 6 Coy. 4th Canadian Armored Division, England
and Continental Europe.

District Supervising Dentist, Dept. Veterans' Affairs for
the province of N.B. February 1946 to August 1948.

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, FEBRUARY, 1950

No. 2

The Significance of Balanced Occlusion Within And Beyond The Normal Functional Range In Complete Denture Prosthesis*

by R. O. SCHLOSSER, D.D.S., F.A.C.D., Professor EMERITUS
Northwestern University Dental School
Chicago, Illinois

THAT a well balanced occlusion of the teeth in complete prosthetic dentures is a significant factor in the maintenance of their stability and retention, and that it also aids in contribution to their functional efficiency, as well as to the comfort of the denture wearing patient, can hardly be considered as a subject for controversy.

However, it is to be admitted that individual conceptions as to what constitutes balanced occlusion, and how and by what methods this may be established, are bound to vary considerably. Consequently I trust you will bear with me in this presentation. I shall endeavour to confine my remarks to the procedures with which years of personal experience have made me most familiar. But this is not to be construed as meaning that the methods I use are exceedingly better than those which any of you may be employing at present, or that I consider them beyond challenge by you.

One of the reasons for presenting my method to you, is that it has enabled me to obtain very gratifying results in innumerable cases, and I hope that this discussion may stimulate your further interest in this particular phase of denture work.

Before getting to the technical details I should like to digress for just a few

moments to cite another reason for choosing this special subject. It is now more than 46 years since a license to practise dentistry was granted to me. During all this time it has been my privilege to observe the many advances made in the field of denture prosthesis, and because of the nature of my work, the development of articulators has had a specific attraction for me. From the days of Garriot, Bonwill, Gysi, Hanau and McCollum, we have had a long procession of pioneers in this field. They were spurred on by the ideals which they visualized, and which they had hoped to achieve.

In some respects we have come a great distance during these years. Yet, when we take a peek behind the curtain and see the many thousands of dentures that are being constructed on loose jointed plain line articulators, and placed into the mouths of the trusting patients with the help of generous application of adhesive powders, have we as a profession much reason to be proud of our accomplishments in this branch of our endeavours?

Surely, it is not that we of today do not believe in ideals, or that we are not interested in raising the standards of our denture work. Then why is it that we leave so much to chance, and in turn expect so much from the laboratory

*Presented at the Annual Fall clinic of the Montreal Dental Club, October 20, 1949.

technicians? Truly I find myself a bit confused over this situation. What then is there that can be offered as a suggestion to remedy this condition? Though having occupied the position of teacher in this field for more than thirty years, I find myself a bit perplexed as I contemplate this situation. During all of this time I have expounded the advantages of adjustable articulators, yet many times I have been, and still am being criticized for the stand which I have taken. In fact it was a rather recent criticism of my work that prompted me to choose the title for this very paper, which I have the temerity to inflict upon you, and for which I beg your indulgence.

DEFINITIONS

Before I tell you how we established balanced occlusion, it seems only fitting that this term be defined, as well as others related to it. Balanced occlusion may be interpreted as the uniformly distributed static contact relations between the maxillary and mandibular teeth in the various positions in which those of the lower jaw or denture meet their opponents of the upper arch. While balanced articulation is the active contact relation present during the various mandibular excursions.

In Lateral Movements, the functional range is the distance that the mandibular teeth travel from centric relation to the working lateral relation in order to bring the opposing buccal and lingual cusps into cusp to cusp contact, while the lingual cusp of the second molar on the balancing side makes contact with the disto-buccal notch of the lower second molar. This movement usually displaces the lower median line a distance equal to half the width of the lower central incisor.

In Protrusive Movements the functional range is the distance the lower incisors travel as they move from centric relation to bring the incisal edges of the lower teeth into edge to edge contact with those of the upper teeth. This varies with the amount of the overjet present, or to be established in the setting of the teeth.

The extent of movement beyond these functional ranges is limited or restricted only by the attached ligaments and muscles. It naturally varies with the size of the jaws.

When the articulation has been balanced, balanced occlusions for all positional relations will have been automatically established. This is equally true within and beyond the functional ranges, and applies also to all intermediate positions.

If mandibular movements were at all times restricted to the specific functional range, no attention would need to be given to relations outside of this range. But, experiments and observations made over a period of years has convinced me, that in many cases the occlusal interferences or disharmonies encountered beyond this range were the direct cause of trauma, fracture of teeth, tipping or dislodgement of the dentures, with accompanying loss of stability and retention. Unless relieved these conditions may cause more rapid resorption of the residual bony ridges, and hypertrophy of the soft tissues. This in my opinion, clearly indicates the need for doing all we can to make sure that both occlusions and the articulation should be properly balanced within and beyond the functional range. How this is to be done, or rather how we have accomplished it, I shall endeavour to describe for you as we continue this discussion.

PRELIMINARY STEPS

It should of course be understood that before we can take up the setting of the teeth the following steps should have been completed: Good stone casts must have been poured up in satisfactory impressions; well-adapted baseplates must have been prepared, and occlusal rims (or as they are more frequently alluded to, bite rims) of suitable form and contour must have been attached to the baseplates; the above must have been employed in the registering of an acceptable vertical dimension of the denture space, and following this, also in the registering, and recording of the positional relations of the

space to the condylar axis in centric and protrusive relations; with the aid of these records which include one taken with the facebow, the casts must have been mounted on an adjustable articulator and the condylar controls set to an indication that would facilitate the setting of the teeth in compliance with the individual functional requirements of the patient.

THE FACEBOW

Unless all of these details are carried out, at least within the realm of reasonable accuracy, no amount of technical skill employed in the laboratory procedures will suffice to produce the desired end results. I grant that it is possible to mount a case without using the facebow, and if a series of lateral and protrusive records are obtained, as well as one of centric relation, it is possible to work out a proper occlusion for the various positions, also that by the milling-in of occlusal curves upon opposing rims either of plastic or wax, this can be accomplished. Yet to me these methods seem infinitely more complex and time consuming. That is why after more than 35 years of experience with the facebow and an adjustable articulator I still prefer these. Not only does the facebow greatly facilitate the proper orientation of the casts, but it also is the means of establishing the mechanically equivalent mandibular movements, because it fixes the radius for the lateral excursions in close conformity to those made by the patient's mandible. This constitutes a distinct advantage not only as the teeth are being set, but also subsequently when after the dentures have been processed, the condylar guidance as set, and through its influence during the milling-in with abrasive paste, produces a more perfectly balanced articulation.

SETTING UP OF TEETH

Let us now concern ourselves with the arranging or setting up of the teeth. From the technician's standpoint, there are two basic factors that must be worked out as we strive to set the teeth

up in compliance with the aesthetic and functional needs of the individual patient. These are, the development of two good dental arches and good occlusion for each of the four primary positions of the mandible: namely, for centric, for right and left lateral, and for the protrusive position. If that is done while the teeth are being set up, the grinding and milling-in to be done after the dentures have been processed, will then result in perfecting the occlusal balance. However, this will only be possible if, as the arches and occlusions are being developed, proper inclinations are given to the long axis of the teeth, so that the forces applied in masticatory effort may be properly controlled, and the potential leverages might be neutralized or reduced to a minimum. This applies equally to the mesiodistal and labio or buccolingual inclinations.

In addition thereto, the development of a proper overbite and overjet must be incorporated, as must good interdigitation be worked out to permit free lateral movements of the mandibular teeth. Lastly, compensating curves of sufficient magnitude to maintain the second molars in contact during excursive movements, and permit the shearing or incising contacts of the anterior teeth without interference, must be provided. Restoration of facial contours in harmony with the type of profile must also be kept in mind, as must the effect of the arrangement of the teeth upon phonation.

Whether we set the teeth up ourselves or delegate this operation to a technician, it is as I have previously mentioned, necessary that the casts be first properly mounted on the articulator, that the mounting is so made as to incorporate the accepted vertical dimension, and that the articulator is adjusted in accordance with the influence of the patient's condylar paths as registered and recorded. Contour restorations as they have been worked out, as well as the various guide lines to facilitate setting the teeth in their proper positions, will prove distinctly helpful.

While in most cases it is usually ad-

visible to set the teeth as close to the ridges as possible, and to place the buccal cusp tips of the lower teeth and the longitudinal grooves of the upper as nearly parallel to the crests of the ridges, yet there are many cases in which because of severe deviation of ridge form and relations, a compromise arrangement must be resorted to.

In some instances where for aesthetic or cosmetic reasons I found it necessary to place the teeth buccal to the ridge crest, it was possible to neutralize the potential leverages by establishing a good balance to the occlusions. This usually called for an increase in cusp height, or the development of a more intense compensating curve or curves. It must be kept in mind that the buccolingual inclinations given the long axis of the teeth, develop the transverse curves, while the mesiodistal inclinations do the same for the anteroposterior curves. During the setting of the teeth, care should be exercised to see that the latter are relatively parallel to the condylar indication as set.

Customarily the upper arch is set up first and then the lower teeth are set to occlude with it. This is done in one of several ways. As far as the posterior teeth are concerned, it makes no great difference whether the upper or lowers are set first, as long as the curves are relatively parallel to the condylar indication and there is ample space to place the teeth yet to be set. I have found it much easier to begin by occluding the second molars first, and then progressively setting the first molar and the two bicuspid. This is because the second molars are at the end of the arches, and also because they are the only teeth that must be set so they will occlude well in both the lateral as well as in the protrusive relation. These occlusions can be more easily worked out by modifying the inclinations of the long axis of the second molars before the other three teeth are set. When it is seen that good contacts are present in centric, in right and left lateral, and in protrusive positions, it is because this portion of the curves is in harmony

with the condylar guidance, and good interdigitation has been established.

It will now be found quite a simple task to set the first molar and the bicuspid, for these three teeth need only to occlude in the centric relation and in the working lateral. Furthermore, after the posteriors have thus been set, the remaining anterior teeth can be quite easily placed in position, and using the same condylar and incisal guidance, the overjet and overbite can be readily worked out to synchronize with the articulation of the bicuspid and molars. After this has been done the case is waxed up and prepared for the try-in. Following a careful scrutiny and the routine test and needed corrections, the dentures are processed and polished and remounted on the articulator.

We have found it a good practice to finish one denture first, and then check up on the probable changes that may have occurred in its processing. This affords an excellent opportunity to compensate for any disturbance to the occlusions before the lower is processed. Thus these potential hazards are cut down about 50 per cent.

When no severe undercuts are present in the dentures, it is often possible to remove them from the casts quite readily and salvage enough of the casts so they can be replaced on the original indexed mountings. If not, it is advisable to make remounting wax records before the casts are removed from the dentures. When the dentures are remounted, the occlusions can be checked to ascertain the amount of change that may have occurred in the processing of the lower denture. If these changes are not appreciable, they can be left until after the fit of the dentures has been checked in the mouth. Otherwise a bit of spot grinding can be done to improve the occlusions before they are tried in.

VOLUME CHANGES

In spite of all that has been done to fully control or minimize volume changes in the processing of denture resins, it must be granted that as yet

we have not attained that goal. It is therefore necessary that a careful checkup be made to ascertain the magnitude of the changes that may have taken place and find a way to compensate for them.

It should be noted at this juncture, that though the writer is agreed with the physicists that denture base resins do undergo changes in the processing, he believes these changes are rarely so severe as to affect seriously the fit of the dentures. And so far as the occlusal disharmonies that are due to these changes are concerned, they can very easily and effectively be eliminated by judicious grinding and milling-in with abrasive paste.

Most of the gross disharmonies, which might better be designated as mal-occlusions, should not be blamed on the volume changes. In reality they are undoubtedly due to failure in closing the flasks, or to some faulty laboratory procedure, as for instance, incorrect mounting of the casts. They may even be due to an incorrect registration of centric relation which had not been previously detected. It matters not so much what the cause may be, unless the magnitude of the mal-occlusion is excessive, corrections may be safely carried out in many of these cases. However, many of the gross errors could be avoided if greater care is exercised in the preceding clinical and laboratory operations. This includes the proper cooling of the flasks after the dentures have been processed, careful removing of the dentures from the casts, and also care in the polishing to see that the resin is not over-heated and warped.

THE CORRECTION TECHNIQUE FOR
PERFECTING THE ARTICULATION AND
OCCLUSIONS OF THE TEETH OF THE
COMPLETED DENTURES

After the polished dentures have been remounted on the articulator in their original positions, wax records of centric and protrusive relations are made on the instrument. Care should be taken to see that the vertical dimen-

sion is not increased with these records. The primary purpose of the records is to confirm the accuracy not only of the previous records and registrations, but also to ascertain that no errors were made in the mounting of the casts and in the adjustment of the articulator controls that govern the directions of the simulation of mandibular movements.

While in most cases we have considered these two records sufficient, we do quite frequently add to these, records of right and left lateral relations which enables us to check the relations in these positions as well. It is advisable to make the protrusive record and the lateral ones with a range of six millimeters. This will not only facilitate a more complete checkup of the setting of the condylar guide indication, but also will furnish the guidance beyond the normal functional range, which in turn will permit the elimination of disharmonies that may be found outside the limits of this range.

After the records have been moulded they should be chilled to harden the wax so as to avoid a possible distortion. Then they should be neatly trimmed about the margins labially and buccally to permit a better inspection of the contacts when the records are placed in the mouth. The case is now ready to be tried in the mouth. Both dentures are tried in separately and tested to see that they fit well, are stable and offer a reasonable resistance to displacement forces and do not hurt the patient, or in more familiar phrases, they are tested for stability, retention and comfort. Next the occlusion is scrutinized in centric relation to ascertain that it is relatively as good as it looked on the articulator. If so, the separate records are now placed in position and the patient is asked to close in the respective positions. Observations are made to see that the surface of the records make a simultaneous contact with the entire closing area, and the patient is asked to interpret the pressure distribution. When

these observations have been made with each of the records, and have been judged satisfactory, the dentures are removed from the mouth, carefully dried and replaced on the articulator.

The argument may be advanced that if the registrations and records had been correctly made in the first place, none of these subsequent checkups should be necessary. This would be a perfectly sound argument if the operator happens to be one of those exceptional individuals who never skids or whose assistants at no time commit an error in the help they render in the process of fabrication of the dentures. Personally neither I, nor those who have at one time or another assisted me in my work, belong in this category. My many years of experience have taught me that overconfidence in one's own ability is not a very desirable characteristic. It is far better to check and triple check if need be, and then find that you are traveling in the right direction, than to assume that you can never err. Pardon this bit of philosophizing. Furthermore, those precautionary methods are not undertaken for the purpose of criticising those who inadvertently may be responsible for the resultant disharmonies, but rather to make certain that everything is in order for their simple and effective elimination.

When this has been accomplished, the dentures are removed from the mouth of the patient, carefully dried and replaced upon the articulator. While a piece of articulating paper is placed in position, the articulator jaw members are closed in centric relation, and moderate pressure is applied. This will mark the high spots or points of interference in this relation. They are now removed by judicious grinding in a manner that will preserve as much as possible of the tooth anatomy. It will be advisable to do most of the grinding on the lower teeth. In this manner the buccal overjet is better maintained, particularly if the occlusal and buccal convexity of the lower cusps are retained in the grinding.

Next, each of the lateral relations and the protrusive one are subjected to similar treatment, one at a time. This separate location of these interferences and their elimination in sequence produces far better results than an attempt to mark all potential spots in all positions at one time. Special care should be exercised to avoid shortening the fused lingual cusps of the upper second molars when striving to perfect the lateral balance lest this result in a loss of contact in the protrusive relation. Again, it is preferable to deepen the opposing lower sulci to provide the needed freedom for lateral movements. In all positions the grinding is only carried far enough to establish a definite three point contact in the lateral and the protrusive relations. Here again the lateral movements should be carried at least six millimeters to the right or left to see that the contacts are present to this extent beyond the functional range. In a similar manner the protrusive movement should be carried a millimeter or two beyond the range that brings the incisor teeth into edge to edge relation.

The actual performance of these operations consumes far less time than it takes to describe them. In cases where the teeth have been reasonably well set up, it rarely takes more than three to five minutes to do the spot grinding. And for those who feel concern about how much this procedure will reduce the vertical dimension, it can be truthfully stated that when carried out as I have just described it, there is little perceptible change.

This stone grinding has thus eliminated the major points of interference. All that remains to perfect the balance now, is the elimination of the possible minor ones that may be encountered either within or outside of the functional range. This will consume another three to five minutes, and is done by applying some rapid cutting abrasive paste to the occlusal surfaces and the incisal edges, and then milling-in the articulation, by a simulation of the

masticatory movements of the mandible. To ensure the elimination not only of the interferences within the functional range, but also from all possible position to which the patient may on occasion carry the mandible, the movements are executed to the full extent permitted on the articulator.

No pressure is applied during the milling other than that which results from the weight of the upper denture, and its supporting cast and mounting plaster which hold it on the maxillary element of the articulator. Digital perception will indicate when the interferences have been fully eliminated.

While this action will have produced a nicely balanced articulation, it has been found that a slight relief of the contacts in the incisor and molar region will lessen the impact shock during the initial contact of the teeth, without effecting their functional efficiency. The relief in the incisor region is made by increasing the condylar guidance five degrees, placing the anterior teeth into edge to edge relation and executing side movements from extreme right to left for one-half to full minute.

That for the molars is done by reducing the guidance five degrees from the original setting or ten degrees from the advanced setting used for the incisors. For this milling a sort of rotary movement is employed for about one minute. Not only does this procedure lessen the impact at the time of the initial contact of the teeth without impairing the function, but it has been noted that it also reduced the tendency to trauma of the soft tissues in these regions.

To add further to the patient's comfort, the ground surfaces of the teeth are now polished to remove the gritty feeling. This is done by adding some moistened pumice to the abrasive paste that is left on the teeth, and polishing the surfaces with a dry muslin or cotton flannel wheel. The dentures are now thoroughly cleaned and placed back on the articulator for final inspection before they are placed in

the mouth. After they have been firmly seated, the final tests for stability, retention and comfort are made, and the occlusions are checked in all positions. When it is observed that the patient can move the lower teeth freely from centric to lateral, protrusive and the intermediate positions without displacing the dentures, it indicates that the dentures fit well and are properly balanced. In other words that the desired objectives have been attained.

The patient then receives instructions in the use and care of prosthetic dentures and is told to report in 24 to 48 hours for a checkup. It must be kept in mind that the fabrication and fitting of these dentures is a problem in bio-mechanics, and though every precaution may have been taken to see that every phase of the work was properly and correctly performed, it is part of our professional duty to render an initial adjustment service to the patient. Usually this service should be continued for 30 to 60 days, depending upon the nature of the case. Subsequently the patient should be recalled at six month intervals for further checkup and adjustments. Not only will this type of service add much to the patient's comfort and satisfaction, but the minor adjustments that are carried out will do much to prolong the functional efficiency of the dentures.

SUMMARY

In conclusion I offer the following summary: The significance of well balanced occlusions of well fitting prosthetic dentures, within and beyond the functional range, carried out in the manner which I have described in this paper is based on the fact that it will provide a stimulus to the supporting structures of the mouth, resulting in a marked improvement in tissue tone. This action will, because it is associated with freedom of normal mandibular movements and freedom from occlusal disharmonies or interferences, reduce to a minimum the potential trauma of soft tissues and enhance the

stability and retention of the dentures. And if the dentures are built to a vertical dimension within the limits of biological tolerance, this factor, be-

cause it will tend to retard the resorption of the residual ridges, should also be considered one of special significance.

ANNOUNCEMENTS

American Dental Society of Europe. Amsterdam, July 19-22.

F. Douglas Derrick, 140 Park Lane, London, W.1.

A.D.A. Convention

The 91st annual session of the American Dental Association will be held in Atlantic City, Oct. 30 - Nov. 2.

University of Toronto, Faculty of Dentistry

CONTINUATION COURSES FOR GRADUATES IN DENTISTRY

Orthodontics

March 13, 14, 15, 1950 or April 10, 11, 12, 1950

The Department of Orthodontics, Faculty of Dentistry, University of Toronto, is conducting a three-day short course in cephalostatic roentgenologic techniques. This course will be under the general direction of Dr. Robert E. Moyers, Head, Department of Orthodontics.

Guest clinicians will be Doctors B. Holly Broadbent, L. Bodine Higley, and H. M. Worth. The demonstrations will be made on a Broadbent-Bolton Cephalometer, Higley Head Positioner, and a Hodge's Head Unit. The presence of these three instruments in the Department of Radiology in this Faculty affords an unusually fine opportunity for study in this field.

This course will be held on either March 13, 14 and 15 or April 10, 11 and 12. Circumstances beyond our control at the moment necessitate the announcement of these alternative dates. It is anticipated that the dates for this course will be finalized early in January, 1950.

Tuition Fee \$50.00

Enrolment limit 10

Those interested are asked to inquire respecting enrolment.

Please address inquiries to:

The Dean,
Faculty of Dentistry,
University of Toronto,
230 College St., Toronto, Ontario.

University of Toronto, Faculty of Dentistry

GRADUATE COURSES IN DENTISTRY

ORTHODONTICS

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The Corrosion of Cobalt Chromium Alloys in Commercial Cleaning Agents*

by DOROTHY ERICA ROSE COGGLES¹, OSMAN JAMES WALKER² and

HERBERT ROBERT MacLEAN³

Edmonton, Alberta

DURING the past twenty years there has been an increasing tendency to make use of a number of base metal alloys in Dentistry. Among these are several that are modified stellites consisting largely of cobalt and chromium with or without the inclusion of nickel, molybdenum, tungsten, beryllium and manganese. These alloys possess the proper physical properties for many purposes including their use in artificial dentures. In addition, they are looked upon as quite desirable from the standpoint of resistance to corrosion in the mouth but up to this time there has been undertaken no investigation on the corroding effect on them of cleaning agents used widely for artificial dentures.

Quite a few of these cleaning agents are on the market. In general, the main ingredient is an oxidizing agent, which may or may not be associated with some surface wetting agent such as a phosphate.

In this investigation measurements were carried out on the extent to which certain of the cobalt chromium alloys regularly used in Dentistry were corroded by cleaning agents of several types. The dental alloys chosen for the study were Denchrome, Durallium, Ticonium and Vitallium⁶.

The cleaning agents chosen represented two types of oxidizing materials. Agents No. 1 and No. 2 contained sodium perborate, trisodium phosphate and sodium chloride^{4,5}, while No. 3 was a commercial preparation that consisted primarily of a dilute solution of

sodium hypochlorite, containing about 0.9% of available chlorine.

EXPERIMENTAL

Since it was expected that the alloys would be somewhat resistant to corrosion it was decided to carry out the bulk of the experimental work at elevated temperatures in order that too long periods be not required. A convenient temperature seemed to be 50°C with the duration of the tests of the order of a month. By using these conditions corrosion would be accelerated⁷, a measure of corrosion as well as a comparison of the relative corrosion effects of the cleaning agents on the different alloys would be obtained.

The method of procedure was as follows:— The size of the test piece³ chosen was one centimeter square, about 0.2 mm thick and all samples were highly polished. Prior to their use, these test pieces were cleaned² by washing for 1 minute in concentrated hydrochloric acid, 15 minutes in distilled water, 5 minutes in ethanol and 5 minutes in ether and then were dried in a desiccator for 1 hour, before weighing to 4 decimal places. This method of cleaning has no appreciable effect on the alloys since they are highly resistant to mineral acids.

The washed samples, after weighing, were suspended by means of crochet cotton in 500 ml. Erlenmeyer flasks containing 250 ml. of corrosion medium. The flasks were closed with rubber stoppers. The method of suspension for samples of Durallium and

*Contribution from the Department of Chemistry, University of Alberta, Edmonton, Alberta. Financed by a grant from the National Research Council of Canada through the Associate Committee on Dental Research.

1. Sessional Instructor in Chemistry, University of Alberta.
2. Professor of Chemistry, University of Alberta.
3. Professor of Operative Dentistry, University of Alberta.

Denchrome was through holes in the centers of the test pieces, but in the cases of Ticonium and Vitallium which were too hard to be easily drilled the thread was tied around the samples. Only one sample was suspended in each flask. Saturated solutions of cleaning agent 1 and 2 were used and cleaning agent 3, which was a solution, was used both diluted with water and at the concentration placed on the market. The flasks were suspended in a thermostatically controlled water bath in which the temperature was controlled to $\pm 1^{\circ}\text{C}$.

During the time the test pieces were left in the solution the flasks were shaken for a few minutes manually each day in order to change the concentration of the solution in contact with the surface of the test piece.

At the end of the testing period, the samples were removed from the flasks, cleaned as before and then weighed. From the weight loss so determined and the original weight of the test pieces the percentage corrosion was calculated.

In the first series of experiments each test piece consisted of only one piece of alloy. The corrosion results are summarized in the Tables I, II, III.

Table I and II indicate that the corrosion of simple test pieces in cleaning agents 1 and 2 is negligible. The specimens used were shiny both before and after the tests. Some of the pieces of Durallium and Ticonium were highly polished on one side only but even these show no evidence of corrosion.

The data in Table I and II show that cleaning agents of the perborate type have no appreciable effect on any of the alloys involved in the experiments, even at the elevated temperatures involved. Dentures made up of simple pieces of these alloys can be safely cleaned by these agents. From Table III it can be seen Durallium and Vitallium are scarcely affected by the cleaning agent of the hypochlorite type but Denchrome and Ticonium are strongly corroded under the conditions of the test. The average for the four tests

TABLE I

Corrosion of Single Test Pieces at 50°C
in Cleaning Agent No. 1

Alloy	Length of test in hrs.	Wt. of sample gm.	Loss in wt. gm.	Corrosion
Denchrome	741	0.2402	0.0002	0.1%
"	741	0.2381	0.0002	0.1%
"	741	0.2264	0.0002	0.1%
Durallium	720	0.6822	0.0004	0.1%
"	720	0.5736	0.0006	0.1%
"	720	0.5815	0.0006	0.1%
"	720	0.3872	0.0003	0.1%
Vitallium	696	0.7273	0.0004	0.1%
"	696	1.0114	0.0004	0.1%
"	696	1.0602	0.0002	0.1%
"	696	1.1104	0.0003	0.1%
Ticonium	741	0.9224	0.0004	0.1%
"	741	0.7890	0.0004	0.1%
"	741	0.9348	0.0004	0.1%
"	741	0.9561	0.0004	0.1%

TABLE II

Corrosion of Single Test Pieces at 50°C
in Cleaning Agent No. 2

Alloy	Length of test in hrs.	Wt. of sample gm.	Loss in wt. gm.	Corrosion
Denchrome	741	0.2264	0.0003	0.1%
"	741	0.2496	0.0003	0.1%
"	741	0.2107	0.0003	0.1%
Durallium	720	0.4582	0.0004	0.1%
"	720	0.4069	0.0004	0.1%
"	720	0.6005	0.0004	0.1%
"	720	0.6801	0.0004	0.1%
Vitallium	696	0.7903	0.0002	0.1%
"	696	0.7433	0.0002	0.1%
"	696	1.0074	0.0002	0.1%
"	696	0.8136	0.0004	0.1%
Ticonium	741	0.8312	0.0004	0.1%
"	741	0.9370	0.0013	0.1%
"	741	0.8954	0.0010	0.1%
"	741	0.7880	0.0006	0.1%

TABLE III

Corrosion of Single Test Pieces at 47°C in Cleaning Agent No. 3
Undiluted

Alloy	Length of test in hrs.	Wt. of sample gm.	Loss in wt. gm.	Corrosion	Remarks
Denchrome	744	0.2268	0.0094	4.2%	Extensive pitting causing complete disintegration of sample in some spots.
"	744	0.2336	0.0082	3.5%	
"	744	0.2264	0.0098	4.2%	Attack in a straight line parallel to one side of test piece.
"	744	0.2426	0.0070	2.9%	
Durallium	719	0.5700	0.0038	0.7%	Jagged edge on sample.
"	719	0.4361	0.0003	0.1%	Shiny
"	719	0.6764	0.0003	0.1%	
"	719	0.5430	0.0003	0.1%	
Vitallium	719	0.8004	0.0020	0.2%	Shiny
"	719	0.9416	0.0012	0.1%	
"	719	1.0132	0.0010	0.1%	
"	719	0.7804	0.0010	0.1%	Scattered pitting
Ticonium	743	0.8240	0.0578	7.0%	
"	743	0.9182	0.1042	11.3%	
"	743	0.8872	0.0649	7.3%	
"	743	0.9302	0.0516	6.6%	



FIGURE 1—Denchrome

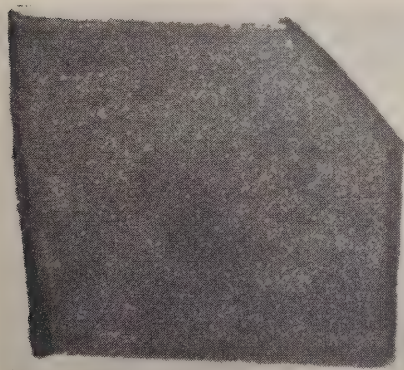


FIGURE 2—Ticonium

with Denchrome was 3.7%, and for the four with Ticonium, 8.0%. The spread in the values is undoubtedly due to loss of chlorine during the testing period as explained later in the paper.

The inference is that a cleaning agent of this type should be used with caution in contact with any fixture containing these alloys. Figs. 1 and 2 are photographs of Denchrome and Ticonium test pieces that show the character of the corrosion.

When pieces of unlike or like metals are joined together and exposed to a liquid medium, corrosion is more likely to occur than if by themselves due to the setting up of miniature electrolytic cells⁷. In order to determine whether a change in the rate of corrosion of these alloys takes place, squares of the alloys, of the same size as before were soldered together with 18 carat gold using the same technique as is met with frequently in dental practice. These were next tested for periods of about a month at 50°C in the same cleaning agents. Results are shown in Tables IV, V and VI.

As was true in the first series of experiments the perborate type cleaning agents have no appreciable effect on the cobalt chromium alloys even when pieces of them are soldered together. With the hypochlorite cleaning agent all of the combinations are noticeably corroded. Several types of corrosion have been observed. In the Durallium-Ticonium combinations extensive pitting had taken place (Fig. 3. and 4.). With the Durallium-Vitallium combinations the bulk of the corrosion was at the soldered joints (Fig. 5 and 6). In the Durallium-Denchrome combinations the Denchrome sections were the ones principally attacked (Fig. 7). Generally speaking, combinations con-

TABLE IV
Corrosion of Joined Test Pieces at 50°C in Cleaning Agent No. 1

Alloys	Time of test hrs.	Wt. of sample gm.	Loss in wt. gm.	Corrosion	Remarks
Ticonium-Ticonium	744	1.9932	0.0024	0.1%	No noticeable change
Vitallium-Vitallium	744	1.7506	0.0004	0.1%	
Vitallium-Denchrome	744	1.3641	0.0002	0.1%	
Vitallium-Durallium	744	1.7379	0.0006	0.1%	

TABLE V
Corrosion of Joined Test Pieces at 50°C in Cleaning Agent No. 2

Alloys	Time of test hrs.	Wt. of Sample gm.	Loss in Wt. gm.	Corrosion	Remarks
Ticonium-Ticonium	744	1.8107	0.0011	0.1%	Surface discoloured
Vitallium-Vitallium	744	2.2373	0.0002	0.1%	
Vitallium-Denchrome	744	1.1046	0.0000	0	
Vitallium-Durallium	744	1.2826	0.0000	0	

TABLE VI
Corrosion of Joined Test Pieces at 50°C in Cleaning Agent No. 3

Denchrome-Denchrome	1060	0.5491	0.0455	8.3%	Extensive attack on Denchrome under solder.
Ticonium-Ticonium	1060	1.8022	0.0703	3.9%	Discolouration—some pits on soldered joints & on Denchrome.
Vitallium-Denchrome	1060	0.8542	0.0328	3.8%	
Ticonium-Denchrome	1060	1.1748	0.0431	3.7%	
Vitallium-Vitallium	1060	1.7301	0.0271	1.6%	Attack on soldered joint.
Ticonium-Vitallium	1060	1.8267	0.0917	5.0%	Discolouration
Durallium-Durallium	336	1.4530	0.0281	1.9%	
"	336	1.3894	0.0204	1.5%	Attack at soldered joints.
Durallium-Vitallium	336	1.4499	0.0164	1.1%	
"	336	1.4244	0.0226	1.6%	
Durallium-Denchrome	336	0.8742	0.0603	6.9%	Extensive attack on Denchrome.
"	336	0.9968	0.0681	6.8%	Pitting
Durallium-Ticonium	336	1.7190	0.0997	5.8%	Extensive pitting.
"	336	1.7678	0.0824	4.7%	



FIGURE 3—Durallium-Ticonium

taining Denchrome and Ticonium were more extensively attacked than those in which neither was present.

The manufacturers of Cleaning Agent No. 3 recommend that their product be used in a more dilute solu-



FIGURE 4.—Durallium-Ticonium

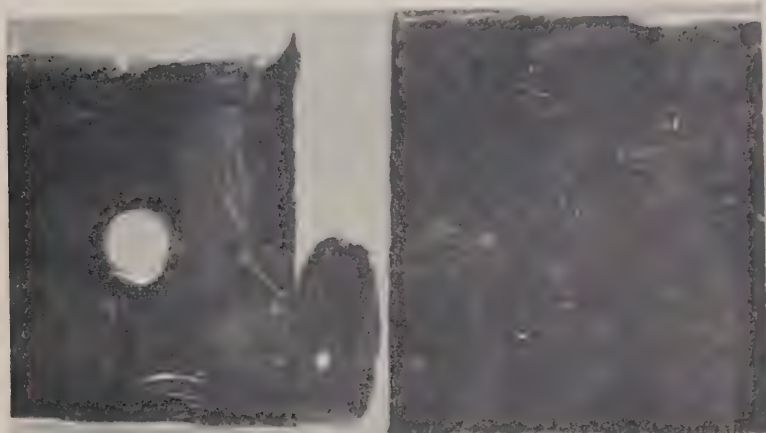


FIGURE 5—Durallium-Vitallium (pieces apart)

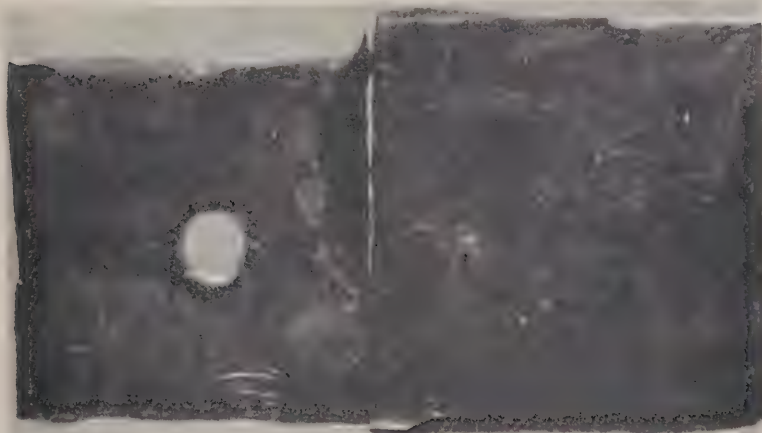


FIGURE 5a—Durallium-Vitallium (pieces in position)



FIGURE 6—Durallium-Vitallium

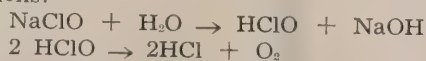


FIGURE 7—Durallium-Denchrome

tion than that at which it is sold, namely diluted on the basis of 35 ml. in 2000 ml. In the third and fourth series of experiments Cleaning Agent No. 3 was so diluted. In the third series the temperature used was again 50°C. Results are shown in Table VIII. In the fourth series temperature was held at 27°C. See Table IX.

The results show that even dilute solutions of this cleaning agent are corrosive to the dental alloys tested, particularly where these alloys are soldered together as they often are in

artificial dentures. As had been expected the rates of corrosion are much less at the lower temperatures. At the end of the runs the solutions were tested for free chlorine⁸. All of it had been used up. Part of it had been used in oxidizing the metals while the remainder had undoubtedly been lost by hydrolysis according to these reactions:



It is quite probable that loss of oxidizing power of the solution took place in

TABLE VIII

Corrosion of soldered samples in dilute solution of cleaning agent No. 3 at 50°C

Alloys	Duration of Test hrs.	Wt. of Sample gm.	Loss in wt. gm.	Corrosion	Remarks
Denchrome-Denchrome	762	0.5300	0.0061	1.2%	Discolouration of pieces. Attack under solder.
Denchrome-Vitallium	762	1.1914	0.0115	1.0%	Discolouration of pieces. Attack under solder.
Vitallium-Vitallium	762	1.5816	0.0026	0.2%	Discolouration
Durallium-Durallium	762	1.0202	0.0047	0.5%	Attack at joint, some pitting.
Ticonium-Denchrome	762	1.1784	0.0027	0.2%	Slight pitting
Durallium-Vitallium	762	1.5929	0.0028	0.1%	Attack at joint.
Durallium-Denchrome	762	1.3374	0.0636	4.8%	Pitting.
Durallium-Ticonium	762	0.8605	0.0313	3.6%	Pitting, discolouration.
Ticonium-Ticonium	1060	1.7538	0.0026	0.2%	Slight pitting.
Ticonium-Vitallium	1060	1.6539	0.0026	0.2%	Discolouration.

TABLE IX

Corrosion of soldered samples in dilute solution of cleaning agent No. 3 at 27°C

Alloys	Duration of Test hrs.	Wt. of Sample gm.	Loss in wt. gm.	Corrosion	Remarks
Denchrome-Denchrome	742	0.7711	0.0085	1.1%	
Denchrome-Vitallium	742	1.1041	0.0074	0.6%	
Ticonium-Denchrome	742	1.2479	0.0070	0.6%	
Durallium-Vitallium	742	1.4394	0.0070	0.5%	
Durallium-Denchrome	742	0.7983	0.0051	0.6%	
Durallium-Ticonium	742	1.5687	0.0058	0.4%	
Ticonium-Ticonium	742	1.5568	0.0048	0.3%	
Ticonium-Vitallium	742	1.7919	0.0052	0.3%	

the earlier stages of the tests. If the oxidizing agent had continually been replaced the corrosion of the metals would have been much greater than had been indicated.

SUMMARY

The cleaning agent of the hypochlorite type corrodes single test pieces of Denchrome and Ticonium at 50°C but has little or no effect on Durallium and Vitallium. However in cases where test pieces are soldered together by 18k gold solder, corrosion of all of the alloys is extensive whether the hypochlorite solution is dilute or

undiluted or if the temperatures at which the tests involved are room temperature or at elevated temperatures.

It is recommended that cleaning agents of the hypochlorite type be used under no circumstance for cleaning artificial dentures containing cobalt chromium alloys because of the danger of corrosion.

Acknowledgments

The authors of the paper wish to express their thanks to the Dental Research Committee of the National Research Council for supplying funds for the prosecution of this research and also to the manufacturers who

supplied the dental alloys and the cleaning agents of the perborate type.

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ANNOUNCEMENTS

Reserve the Dates NOW for the

NATIONAL CONVENTION OF THE C.D.A. AND O.D.A.

ROYAL YORK HOTEL

TORONTO

MAY 14, 15, 16, 17, 1950

HOTEL ACCOMMODATION

MAKE ANY RESERVATIONS DIRECT WITH THE HOTEL

The Association will not be responsible for any Hotel Reservations.

Pictorialists Note!

At the coming C.D.A.-O.D.A. Convention there will be an exhibition of pictures made by members of the profession. Original work in any medium—photographs, watercolours, oils, drawings, etc., may be submitted. If interested, send for entry form to Dr. E. B. Sisley, Ontario Hospital, New Toronto, Ontario.

Note:—This exhibition is not competitive, so let us see your work.

Class Reunions

Be prepared—Complete arrangements as soon as possible.

2T5 Silver Anniversary

The committee wish to thank the class members who have so promptly replied to the president's letter.

The co-operation of those who have not done so would be greatly appreciated. Forward replies to the Secretary, Dr. L. M. Grose, 663 Greenwood Ave., Toronto. Make your Hotel reservations NOW, to avoid disappointment.

Class of 2T0 Reunion

Members of this class are asked to note that arrangements are being made to celebrate our Thirtieth Year of Graduation during the coming National Convention, May 14-17, 1950 in Toronto.

Address all enquiries or suggestions to Secretary at 347 Bay Street, Toronto.

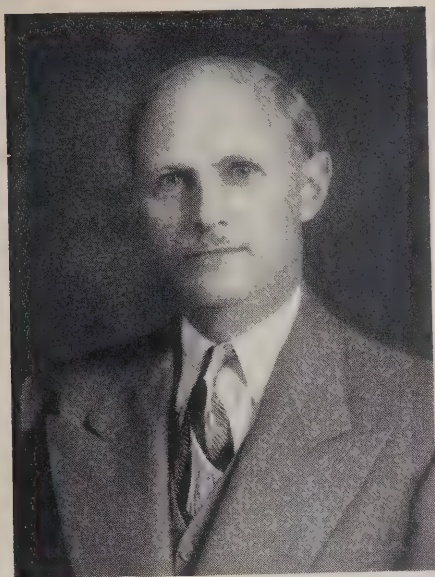
Wendell T. Holmes.

Class 3T5 Reunion

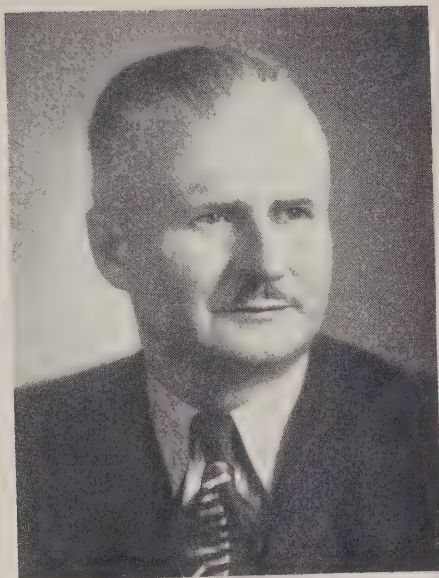
Members please note that arrangements are being made for a reunion dinner on May 15 at the Convention.

Please send all reply cards and enquiries to Secretary:

Dr. W. J. Mason, Richmond Hill, Ont.



DR. G. V. FISK,
C.D.A. President 1949-50.



DR. L. M. GROSE,
O.D.A. President 1949-50.

The success of the combined meeting of the Canadian Dental Association and the Ontario Dental Association is assured under the able guidance of the above presidents.

O.D.A. PRESIDENT'S INVITATION

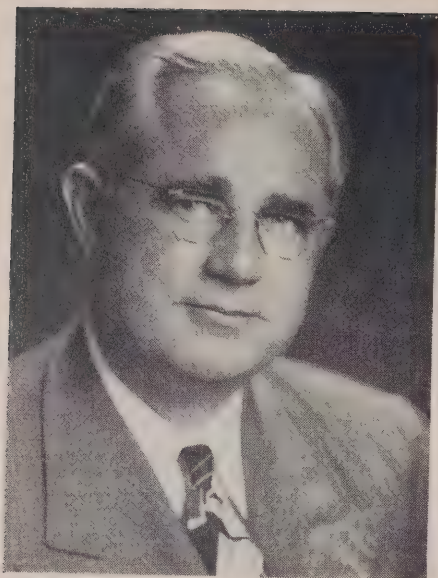
The beginning of the New Year "January 1950" serves to remind us that the confusion of the approach to Christmas has again passed and, with it, the winter holiday season for another year. It also serves to remind us that we have actually entered "Joint Convention Year," and that is the year in which dentists from all parts of Canada will convene in Toronto, May 14-17, giving and accepting hospitality, instruction and good fellowship.

It is recorded that in the pioneer days of both East and West, people didn't wait for an invitation to a party. They decided to go as soon as they heard that one was being arranged, something after the fashion of the Calgary Stampeders and their followers, when they heard about a party in Toronto last November.

It is a pleasure to report that committees appointed to prepare the program details, have worked and planned faithfully and well. They have arranged for convention essayists and clinicians, much earlier than has been the custom, with the result that an announcement can already be made, that the program for the event is now complete—the party is ready.

I would like nothing better than to be able to visit each of our Canadian centres, with a personal invitation to dentists living in them. This pleasure I must forego, and may I ask YOU, in Newfoundland and British Columbia, and in all the provinces between, please accept this as a personal invitation, extended on behalf of the Ontario Dental Association, the Convention Chairmen, and their committees, to come and share in the deliberations of the Joint Convention in the Royal York Hotel, Toronto, May 14-17, 1950.

LLOYD M. GROSE,
President, Ontario Dental Association.

**ESSAYIST:**

DR. HERMANN BECKS,
San Francisco, California.

Professor of Dental Medicine, University of California.

Author, Teacher. Research in many fields. At least 80 publications in research journals covering many problems in Dentistry, Medicine, Pathology, Anatomy, Zoology and Endocrinology.

SUBJECT: Development and Maintenance of the Health of the Oral Structures.

SUMMARY OF ADDRESS, BREAKFAST SESSION, ONTARIO DENTAL ASSOCIATION

At the combined Meeting of the O.D.A. and C.D.A.

MONDAY, MAY 15th, 8 a.m.

Nutrition Education in Public Health Dentistry

by Dr. E. W. McHENRY, School of Hygiene, University of Toronto

The aspects of nutrition which need to be stressed from the viewpoint of dental health are those concerned with tooth formation and with the prevention of dental caries. The nutrients needing emphasis are calcium, phosphorus, vitamin C and vitamin D from a positive standpoint and sugar in a negative sense. All of the nutrition education which is advisable from the dental viewpoint is identical with that required for the improvement of general health. Separate nutrition education programs, devised by or for different professional groups are unnecessary and inadvisable. The urgent need is for a concerted effort.

Dr. E. W. McHenry is Professor of Public Health Nutrition in the University of Toronto. He is consultant on nutrition for the Ontario Department of Health and for the Ontario Department of Welfare. Dr. McHenry has been a member of the Canadian Council on Nutrition since its beginning. Between 1940 and 1945 he was a member of the Advisory Committee on Nutrition for the Department of Defence and a member of a similar committee for the Wartime Prices and Trade Board. Dr. McHenry is a member of the editorial boards of the *Canadian Public Health Journal* and of the *Journal of Vitamin Research*. Since 1940 he has been consultant on nutrition for the General Education Board of the Rockefeller Foundation. Dr. McHenry is chairman of the Ontario Interdepartment Nutrition Committee.

Dr. McHenry was born in Streetsville, Ontario, and is a graduate of the University of Toronto. Since 1932 he has been concerned with a number of nutrition surveys and with fundamental research on the mechanism of action of various vitamins.



ESSAYIST:

DR. LEONARD SAMUEL FOSDICK,
Evanston, Illinois.

Professor of Chemistry, Northwestern Dental
School.

Chairman of Committee of Research and
Publication

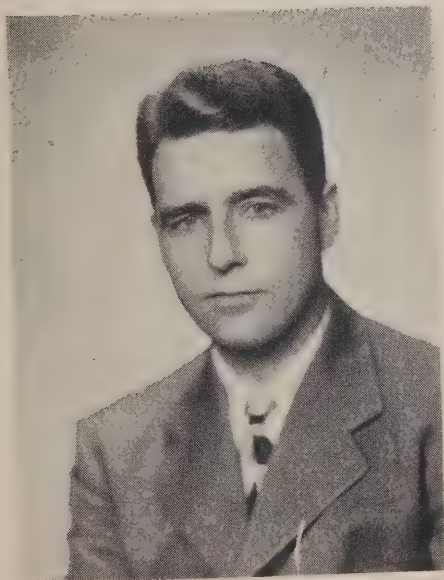
Vice-President, International Association of
Dental Research

Author and Teacher, Research in Dental Caries,
Pyorrhea.

Synthetic local anaesthetics.

Synthetic vaso constrictors.

Subject: Use of Oral Hygiene Procedures
in the Control of Dental Caries.



ESSAYIST:

DR. JOHN R. THOMPSON,
Chicago, Illinois.

Professor of Orthodontics, Northwestern
Dental School.

Honorary fellow in Academy of Denture
Prosthesis.

1948—Presented post-graduate courses in Sweden,
Denmark and Norway.

Subject: The Application of the Rest Posi-
tion of the Mandible in all Phases
of Restorative Dentistry.

ANNOUNCEMENTS

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ROYAL YORK HOTEL • CONCERT HALL

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Plan now to enjoy this hour of good fellowship and excellent music.

Dr. W. G. McINTOSH, Chairman

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Monday, May 15, 1950; 12:30 p.m. • Wednesday, May 17, 1950; 12:30 p.m.

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MAY 15 - 17, 1950

A splendid program of entertainment is being arranged for the ladies attending the 1950 convention. A cordial invitation is extended to all ladies to accompany their husbands. More details will be given in subsequent issues of the Journal, but here are the highlights:

SUNDAY EVENING—Musicale • MONDAY—Conducted Tours—
Ladies' Dinner

TUESDAY—Luncheon—Guild Inn—Convention Dinner & Dance

WEDNESDAY—No scheduled program • THURSDAY—Trip to Niagara Falls

GRAND TOUR TO NIAGARA FALLS

Entertainment Feature—THURSDAY, MAY 18, 1950

Gray Line coaches leave Royal York Hotel at 9.00 a.m. returning 7.00 p.m. Ample time to visit historic and scenic spots of Niagara district.

Cost—\$7.00 per person including Luncheon in the beautiful Rainbow Room, General Brock Hotel.

APPLICATION SHOULD BE MADE BEFORE MAY 1, 1950

CHEQUES PAYABLE AT PAR TORONTO ACCOMPANY APPLICATIONS

Miss Dorothy Jutton, Treasurer,
Ontario Dental Association,
86 Bloor St. W., Toronto, Ont.

ARTISTS AND PHOTOGRAPHERS NOTE—

Do not forget the non-competitive exhibition of paintings, drawings, photographs and colour slides at the coming C.D.A.—O.D.A. convention. For information and entry form please send at once to:—

Dr. E. B. Sisley, Ontario Hospital, New Toronto, Ontario.



MRS. G. V. FISK,
Co-Chairman of
Ladies' Committee.



MRS. L. M. GROSE,
Co-Chairman of
Ladies' Committee.

An Invitation To The Ladies

MAY 15-17, 1950

A splendid program of entertainment is being arranged for the ladies attending the 1950 convention. A cordial invitation is extended to all ladies to accompany their husbands. More details will be given in subsequent issues of the Journal, but here are the highlights:

SUNDAY EVENING

MUSICALE



MONDAY

CONDUCTED TOURS
LADIES' DINNER



TUESDAY

LUNCHEON-GUILD INN
CONVENTION DINNER
& DANCE



WEDNESDAY

NO SCHEDULED PROGRAM



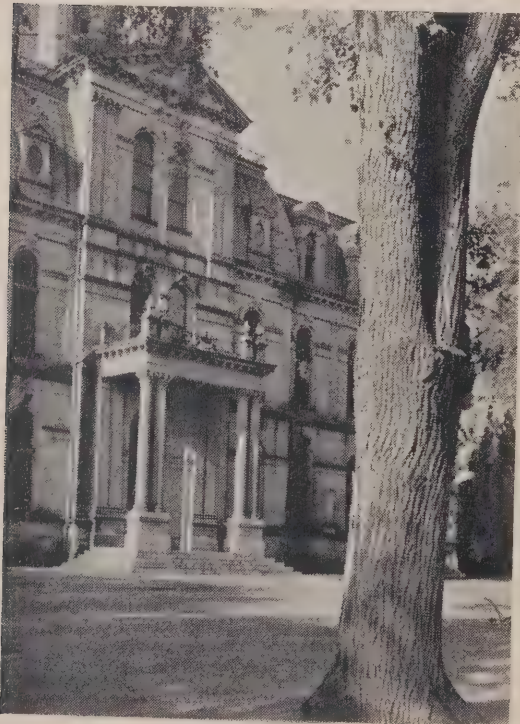
THURSDAY

TRIP TO NIAGARA FALLS



Courtesy Bureau of Publication, Province of Saskatchewan.

Delegates from Saskatchewan can be assured a real welcome at the Joint Meeting of the Canadian Dental Association and the Ontario Dental Association.



The National Meeting of Canadian Dentists look forward to greeting many delegates from New Brunswick.



Courtesy Bureau of Information, and Tourist Travel, Province of New Brunswick,

The Forum

IT'S DIFFERENT WHEN IT HAPPENS TO YOU

by MORTON HACK*

There is a reduction to the absurd in this matter of government control. We can state with some assurance that the community should operate a water plant, perhaps even a power plant—but there is a sphere for private enterprise, even in such matters which are of community-wide interest.

We consider it a proper function of government to regulate licenses to drive an automobile or to practise medicine—but once we've passed the examination, so long as we adhere to the rules laid down for the protection of our fellows, we want to do the driving ourselves.

Look out: it's the doctors this time. Next time, there will be some who will prove to too many of the kind-hearted that the government should operate all shoe stores.

Why not? Doesn't everybody need shoes? Weren't shoes the only article of clothing rationed? And isn't it true that many people don't have all the shoes they need? Surely you'll admit that many people can ill afford what shoes they do buy. Many people must wear inferior shoes because they can't afford the best.

There are too many shoe stores anyway. It is wasteful competition. Under governmental control, we'll have fewer stores, and people will get their shoes free. It is true that they'll have to stand in line for permits, after they produce the necessary documents of necessity with supporting affidavits, notarized, of course, in triplicate. And for Hack Shoes, they'll need certifi-

cates in quintuplicate, from three doctors, including one orthopedic specialist, attesting to their degree of disability. Naturally, the rules and required forms will be changed periodically, without notice.

The State Shoe Stores will be open at specified hours, 10-12; 2-5, no Saturdays or holidays. All those not fitted by 5 will be required to return on the next business day.

There will be no fitting stools. You will try on your own shoes. There will only be one style. Different styles are wasteful of materials and stock space.

There will be one shoe fitter to each 15,000 persons. Each State Store will have a manager and an assistant manager as well as two stock men, two porters, two cashiers and two record clerks. Also a stenographer for the manager and a clerk-typist for the assistant manager's office.

Cities and counties will be subdivided into zones, each of which will have a Zone Supervisory Office. The Zone Supervisor will have an assistant, two stenographers, three record clerks, three "shoppers" and a maintenance crew consisting of a carpenter, painter, plumber, electrician, heating engineer and their assistants. The Zone Supervisory office will collect and bulk all orders for replenishing of stock for forwarding to the next higher echelon. This will be repeated at all echelons with a subsequent time lag in transit of all orders of about six months.

The City or County Director will have adequate staffs including shoe

*Hack Shoe Company, Detroit 26, Michigan.

store architects and a central warehousing executive.

At the State level, we will have a Managing Director of Shoe Stores for the State. He will be responsible to the Federal Regional Coordinator for Shoe Stores who in turn will be under the

Federal Director of Shoe Stores, in the Federal Security Agency.

And everyone will have fallen arches from standing in line to get their shoes.

Do you *really* want State Medicine?
—Jour. Michigan State D. Soc.

TOBACCO AND GINGIVITIS

by JENS JORGENS PINDBORG, from the Royal Danish Navy, Dental Corps, Copenhagen, Denmark
Summary of paper in Jour. of D. Research, October, 1949

By examination of 5,690 Danish Royal Marines a correlation has been found between consumption of tobacco and ulceromembranous gingivitis, between consumption of tobacco and de-

position of calculus, and between calculus and gingivitis. Furthermore, it is shown, solely by means of statistical data, that the tobacco has an effect per se, on the gingival tissues.



"You'll need a pretty expensive operation.
Of course, you might move to England, be-
come a citizen and let the government do it"

COLLIER'S

CHON DAY

THE NATIONWIDE TOPICAL FLUORIDE DEMONSTRATION PROGRAM

By JOHN W. KNUTSON, D.D.S., Dr. P.H., Washington, D.C.

Summary of paper on J.A.D.A., Oct., 1949.

The fluoride demonstration program in helping to improve the dental health of the country through:

1. Providing information on the approved application technique to dentists, health officials, civic leaders and the public.
2. Showing how community fluoride programs might operate.
3. Stimulating national and local interest in dental health.
4. Marshalling local resources—dentists, civic organizations and health officials—in community-wide attacks on the problem of dental caries.

The profession of dentistry has certain innate responsibilities. Those responsibilities extend far beyond the doors of each individual office. They extend into the home and the community and throughout the nation—wherever people are in need of better health. During recent years, there have been ever-increasing signs that the family dentist is striving to meet those responsibilities. More and more he has become interested in dental health on a community-wide basis. Now that he has a partial caries preventive,

I believe that he will bring it to as many children as possible. But I don't believe that the family dentist will stop there. He will recognize that a partial caries preventive is not enough.

Interest in the topical application of sodium fluoride is an excellent starting point for developing more effective appreciation and utilization of the whole gamut of modern dental health services. This larger undertaking can be launched by coupling dental inspections with the topical fluoride program and by establishing an effective system of referral for necessary treatment services.

The launching and maintenance of such programs will broaden the horizons of opportunity for both the dental profession and the public. In charting the course for the launchings the importance of integrating the dental with the general health program of a community will become clearer. The number of community dental health programs launched will determine whether or not dentistry joins the voyage now under way to establish adequate local health services, community by community, throughout the nation.

CHLOROPHYLL : THE GREEN WONDER DRUG

By GUSTAV WM. RAPP, Ph.D.

Summary of paper in Illinois D. Jour., Oct., 1949.

We may summarize the discussion about the usefulness of this relatively new therapeutic agent, water-soluble chlorophyll, in the following way:

The solution, ointment or paste containing this green agent has been found useful in the clinical application for at least the following conditions:

1. VINCENT'S INFECTION.

Studies on this disease indicate that the acute condition very quickly succumbs to the treatment. Solutions, ointments and also the paste dentifrice have been used for this disease.

2. PYORRHEA ALVEOLARIS.

The judicial application of ointments of water-soluble chlorophyll derivatives as well as home use of the paste together with the mouth wash have given dramatic results in most of these cases. In all instances the odour disappeared and tissue repair could be noted.

3. DRY SOCKETS.

Chlorophyll is not a local anaesthetic. However, it does possess some anodyne activity. When employed together with an anaesthetic such as benzo-

caine ointment, aside from the relief from pain due to the anaesthetic there is soon noted the production of healthy granulation tissue.

4. OSTEOMYELITIS.

This application should be of interest to oral surgeons and facillo-maxillary surgeons. It bears careful study. While much information is at hand about its use in other parts of the body, the head has thus far escaped intensive investigation with this medicament.

5. GINGIVITIS.

In all cases of the so-called non-specific gingivitis, there has been rapid and dramatic relief. Intensive studies are now under way to investigate the various types of gingivitis and the effect of chlorophyll preparations on them. The solution used as mouth wash and perhaps more important, the dentifrice containing the water-soluble chlorophyll derivatives are the most likely to produce good results.

6. FETOR EX ORE.

To combat halitosis from the oral cavity, or wherever a mouth wash can

reach, nothing has yet equalled the chlorophyll solutions. If the odour originates from the upper respiratory tracts, rhinologists have found much benefit from the use of the chlorophyll solutions.

The use of the dentifrice paste has been beneficial in the control of halitosis in many clinical subjects. As mentioned before, not only is the existing odour destroyed, but the return of the odour is actually retarded.

—Reduction of the number of *Lactobacillus Acidophilus* in the Oral Cavity.

Clinical studies have indicated that both the solutions but better the dentifrice paste are new and potent weapons which the dentists can use to help the patient to supplement the professional dental care with rational home care in reducing dental caries. While at present there are no objective data available which can be used to evaluate the effect of chlorophyll preparations on tooth decay, certainly the results of the studies testing the effect of the drug on the oral *L. acidophilus* flora are highly encouraging.

CARIES INCIDENCE REDUCTION BY UNSUPERVISED USE OF 27.5 PER CENT AMMONIUM THERAPY DENTIFRICE

by CHESTER J. HENSCHER, D.D.S., and LEON LIEBER, D.M.D.

Summary of paper in Jour. of D. Research, June, 1949

The caries incidence experience of 220 private patients is reported in relation to the use of cosmetic and therapeutic dentifrices with unsupervised average home care. The test group of 100 cases used cosmetic dentifrices an average of 7.8 years, average D.M.F./yr. 2.39. Using a 27.5 per cent active ingredient ammonium therapy dentifrice an average of 34.3 months, average D.M.F./yr. 1.55. Control group of 50 used cosmetic dentifrices throughout observation period of 12 years; pre-test period average D.M.F./yr. 2.31, test period 2.48.

An average caries incidence reduction of 37.5 per cent is noted for the

test group over the control group during the test period; 35.2 per cent reduction of the test group, test period over the autocontrol period, same group. A reduction was manifest in 82 per cent of the test patients.

By weighting the figures to give more equal consideration to each patient instead of each D.M.F., the figures are 41.9 per cent and 41.2 per cent respectively. We would tend to minimize even the former figures because, as a matter of fact, some proportion of the apparent caries-incidence reduction may be attributed to enthusiastic oral hygiene heightened by the knowledge of the possible therapeutic benefit of the dentifrice,



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Editorial

COMPOUND "E"

One hundred years ago Thomas Addison first described the disease which bears his name at a meeting of the South London Medical Society, but though his clinical observations were so complete, physiology and biochemistry had not reached the status which permitted him to carry on his work any further. However, his brilliant analysis led to the development of the now important science of endocrinology.

Since then great strides have been made in the study of hormones and much chemical knowledge acquired as the result of this study. Certain compounds have been discovered which have created unusual interest throughout the world. The now famous "Compound E" ("cortisone") is one of them, a compound which has been much discussed on account of its dramatic effect in the treatment of certain rheumatic diseases.

Cortisone has been obtained from bile acid but the yield, after a long series of experiments, is less than one-thousandth part of the theoretical. Recent discoveries have shown that "cortisone" may be prepared from certain plants. In the meantime U.S.A. pharmaceutical manufacturers are greatly increasing their plants to produce this substance from ox bile. However, the quantity which will be prepared in a year from the bile of 200,000 cattle will yield only about 2700 g. of cortisone, according to the British Medical Journal. This represents 27,000 doses of 100 mg.—a very small amount even for limited research purposes. It is a tremendous chemical problem and at present the material costs £4,500 for a three weeks' course for one patient, and if the treatment is discontinued the patient relapses, according to Dr.

P. M. F. Bishop in Guy's Hospital Gazette. Dr. Bishop also states that it is impossible to buy a pig's pituitary anywhere in the world as they have all been "cornered" for the extraction of A.C.T.H., a pituitary hormone which stimulates the adrenal cortex to produce its own cortisone. It is said that the glands of 400,000 hogs are required to yield one pound of A.T.C.H.

Furthermore, the British Medical Journal of November 9, 1949 said editorially that from recent experiences the question is bound to arise as to whether or not arthritis can be held in check indefinitely by the continued treatment with cortisone or A.C.T.H.

This problem is of interest to dentists because some have arthritis and all have relatives or friends who are so afflicted.

M. H. G.

BOOK REVIEW

Dental Anatomy by Robert C. Zeisz, D.D.S., F.A.C.D., F.I.C.D. Formerly Associate Clinical Professor of Crown and Bridge Prosthesis. Chairman of the Divisions of Tooth Morphology and Applied Dental Anatomy. University of California.

and

James Nuckolls, D.D.S., F.A.C.D. Professor of Operative Dentistry. Chairman of the Division of Preclinical Sciences. Chairman of the Section of Oral Pathology. University of California. 485 pages. 427 illustrations. Price \$16.00. Published by C. V. Mosby Company, St. Louis, Canadian agents: Mc-Ainsh & Co. Ltd., Toronto.

A brief report as to:—

1. Suitability as a class textbook
2. As a reference book.

As defined, dental anatomy is the science of the structure of the teeth of man.

The authors have adhered very closely to the above definition.

A very lengthy and exhaustive description of each tooth has been given, for permanent and deciduous teeth, which is very excellent.

Five or more aspects of each tooth have been very clearly illustrated in a very artistic way but no figures of natural skulls, jaws, or teeth.

The illustrations of the permanent anterior teeth show heavy rolls of enamel at the cervical line which is greatly accentuated, and does not appear to be the average.

In the case of the posterior teeth, the central development groove has been extended over the mesial and distal marginal ridges. This is not the average case, and very misleading to the student.

The illustrations of the deciduous teeth are more natural and very good.

The internal anatomy of both dentitions is very well depicted.

The chapter on occlusion is very well given.

The text lacks the chronology of the dentitions, with no mention of growth and development.

In my personal opinion this textbook would not be suitable for students.

As a reference book it might be misleading to the student as it is too diagrammatic.

W. J. S. Jackson,
Associate Professor,
Dept. of Dental Anatomy,
University of Toronto.

"New Teeth for Old," by Victor H. Sears, D.D.S. Canadian Agents: McAinsh & Co., Ltd., Toronto. Paper bound \$2.00. Cloth bound \$2.50.

A Book for:

Persons who have lost or will lose their natural teeth.

Dentists who acquire reliable information to support their own advice to patients.

Physicians who must counsel patients on health problems involving teeth.

This book is written as a story, not as a thesis, in a pleasing and understandable style, interspersed here and there with subtle humour. It contains very few technical or professional terms and the story is told in a free-running way that maintains interest to the end. The reader is impressed with the accuracy of the information given.

While it is written specifically for wearers

of dentures, prevention and loss of teeth is splendidly covered and if one is trying to adjust his eating habits to new artificial dentures, there are included recipes for making this adjustment easier and eating pleasanter.

This book is informative, scientifically sound and makes good reading. It might well find a place on the reception room table of every dentist and physician, and handed to patients to read when advice is necessary.

Harry S. Thompson, D.D.S.

Dental Practice Management, Second Edition, by S. L. Drummond-Jackson, 370 pages. Published by Staples Press Limited, Mandeville Place, London, W1. Price 30/- net.

This author is convinced that the average dental surgeon could, by efficient management: Perform 50 per cent more work—with less fatigue; take 50 per cent more fees—thus raising his living standards; improve his operative efficiency; retire 5-10 years earlier, in better health. He believes for his best endeavour, a dentist should expect:—To live and work in reasonable comfort; to consolidate his finances to tide over emergencies; to bring up and educate a family; to take an adequate vacation each year without worry; to provide for his retirement, and then he proceeds to tell how all this can be accomplished.

It is obvious that success in the practice of dentistry depends a great deal upon the sound application of recognized business principles and this book contains a legend of those principles. However, we must remember that this book is written chiefly for dentists living in Britain and that certain customs of that land naturally affect the principles laid down. On the other hand, there is very much of great value to dentists practising in any land. Most dental problems are, in the last analysis, personal ones and call for a personal solution. However, one could hardly help but be greatly assisted in arriving at the solution of these problems by a careful perusal of this well-written book.

M. H. G.

Surgery of the Jaws by Julious Roy Bourgoyne, B.S., D.D.S., Diplomate of American Society of Oral Surgery: Chief of Oral Medicine and Surgery Staff, John Gaston City-County Hospital: Associate Professor in charge of Oral Surgery and Anaesthesia

Univ. of Tennessee College of Dentistry. 646 pages. 564 illustrations. Published by Dental Items of Interest Publishing Co., 2911 Atlantic Ave., Brooklyn, N.Y. Price \$12.00.

This book has been written for the one who wishes to acquire surgical technique without the necessity of reading a multitude of volumes on the subject. The manuscript is concise and to the point, stressing clinical procedures particularly and leaving other subjects such as diagnosis, pathology, and medications to be handled only briefly. The book is planned with a definite idea of being a practical guide to the practitioner in the care of surgical patients.

The following subjects are dealt with: Examination; Anaesthesia; Radiographic Technique; Diet; Operating Room Technique; Emergency Treatment; Haemorrhage; Sutures; Shock; Penicillin Therapy; Methylene Blue-Sulpha Drug Medicament; Actinic Ray; Minor Operations; Apicoectomy; Sialolithiasis; Salivary Gland Involvements; Dry Sockets; Maxillary Sinus; Dental Nerve Involvement; Postoperative Treatment; Oral Surgery for Children; Soft Tissue Tumours; Impacted Teeth; Cysts; Abscesses; Fractures; Osteomyelitis; Temporomandibular Joint Disturbances; Resections; Trifacial Neuralgia, Cleft Lip and Palate.

This book is so well illustrated that the story, in many cases, is comparatively clear even without reading the text. A perusal of the volume should prove helpful and interesting.

M. H. G.

The 1949 Year Book of Dentistry (Sep. 1948-Aug. 1949) Published by the Year Book Publishers, 200 East Illinois Street, Chicago 11, Ill. 656 pages. 404 illustrations. Price \$5.00.

The volume is quite up to standard as would be expected with such editors as Stanley D. Tylman, D.D.S., M.S., Prof. of Prosthetics, Univ. of Illinois: Donald A. Kays, D.D.S., Prof. of Operative Dentistry, Univ. of Nebraska: John W. Knutson, D.D.S., P.H., Dental Director, Public Health Service, Washington, D.C.: George R. Moore, D.D.S., M.S., Prof. Dept. of Orthodontics, Univ. of Michigan: Hamilton B. G. Robinson, D.D.S., Prof. of Dentistry, Ohio State Univ.: and Carl W.

Waldron, M.D., D.D.S., Clinical Prof. of Oral Surgery, Univ. of Minnesota.

Two of these editors have been newly appointed, namely, Dr. Robinson and Dr. Knutson. Included for the first time is a comprehensive review of the public health aspects of dentistry.

This year, articles have been arranged according to subject and all editors have com-

mented on articles throughout the book. In some instances more than one editor has commented on the same article. This plan is a great improvement on the previous one where articles were arranged within departments, a single editor being responsible for each.

As usual, this book is concise, practical, and helpful.

M. H. G.

ROYAL CANADIAN DENTAL CORPS NEWS

Lt-Col. K. M. Baird, Lt-Col. G. B. Shillington and Major B. P. Kearney of The RCDC School, presented a group clinic at the Mid-Winter Meeting of the Toronto Academy of Dentistry. The presentation covered the method of examination and treatment planning recommended by The RCDC School for use by the clinic officer.

2. Major S. K. Oldfield, Vancouver, B.C., is attending a post-graduate course in Operative Dentistry and Crown and Bridge Prosthesis at the School of Dentistry, University of Washington, Seattle, Wash. The course commenced on January 5, 1950 and is of five months duration.

3. The Red Cross Symposium on Disaster Relief held in Toronto on December 5, 6 and 7, 1949, was attended by Surgeon Captain A. McCallum, OBE, VRD, Medical Director General, Royal Canadian Navy; Brigadier W. L. Coke, OBE, Director General of Medical Services, Canadian Army; Group Captain A. A. G. Corbet, ED, Director of Health Services, Royal Canadian Air Force, Colonel E. M. Wansbrough, OBE, MM, ED, Director General Dental Services. Included in the discussions were addresses on problems of civil defence by Major-General F. F. Worthington, CB, MC, MM, Civil Defence Co-Ordinator, and Major-General C. G. Mann, CBE, DSO.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Highlights of 1950 Annual Meeting

The 1950 Annual Meeting will be held in cooperation with the Ontario Dental Association at the Royal York Hotel, Toronto, May 15-17 next.

The program has been developed by the Convention Committee under the Chairmanship of Dr. C. H. M. Williams.

Convention theme—PREVENTION AND CONSERVATION.

Some of the highlights arranged for are as follows:

SPECIAL FEATURE

Celebration of 75th Anniversary of Dental Education in Canada.

In celebration of this event the program for the last half day of the Convention will be taken over by the staff of the Faculty of Dentistry, University of Toronto and take place in the Dental School.

ESSAYISTS

Dr. Hermann Becks—

University of California, San Francisco.

Subject—"Development and Maintenance of the Health of the Oral Structures."

Dr. L. S. Fosdick—

Northwestern University, Chicago.

Subject—"The Use of Oral Hygiene Procedures in the Control of Dental Caries."

Dr. John R. Thompson—

Northwestern University, Chicago.

Subject—"Application of the Rest Position of the Mandible in All Phases of Restorative Dentistry."

GROUP CLINICIANS

Dr. Victor L. Steffel—Ohio State University.

Subject—"Removable Partial Dentures and Related Factors."

Dr. Robert E. Moyers—University of Toronto.
Subject—"Diagnostic Procedures in Orthodontics for the General Practitioner."

Dr. E. Romly Romine—University of Michigan.
Subject—"The Conservation of Oral Structures Through Operative Procedures."

Dr. Hermann Becks—University of California.
Subject—"Practising Prevention."

Dr. Gerald Racey—
University of Montreal and McGill University.
Subject—"Diagnosis for the General Practitioner."

Dr. Douglas Richardson — McGill University.
Subject—"Endodontia for the General Practitioner."

Lt.-Col. K. M. Baird—
Lt.-Col. G. B. Shillington—
Major B. P. Kearney—
Royal Canadian Dental Corps
Subject—"Examination and Treatment Planning."

Dr. J. Arthur Renaud—University of Montreal.
Subject—"Amalgam: Its Evolution and Most Recommended Technique."

Dr. H. M. Worth — University of Toronto.
Subject—"Some of the Aspects of Dental Radiography."

Dr. Scott Hamilton — University of Alberta.
Subject—"Oral Surgery for the General Practitioner."

Dr. Felix French — — — Ottawa.
Subject—"Occlusal Patterns."

Dr. Edward Bilkey — University of Toronto.
Subject—"Space Maintenance."

Dr. W. G. McIntosh, Dr. W. J. McGanity,
Dr. Harry Ebbs, Dr. E. W. McHenry—
University of Toronto.
(Under auspices of Ontario Dental Public Health Committee)
Subject—"Practical Nutrition in Every Day Practice of Dentistry."

LUNCHEON SPEAKERS
Mr. John Fisher—Canadian Broadcasting Corp.
Subject—"Dental Education in Canada."
Dr. Harvey W. Reid—Chairman, Committee on Health Insurance, Canadian Dental Assoc.
Subject—"Health Insurance Today."

Resolutions Received from Corporate Members

At a meeting of the Council of the College of Dental Surgeons of British Columbia, held on November 26, the following Resolution was approved:—

- The Council is of the opinion—
- (1) That, subject to the approval of the other corporate members, Toronto be considered the logical location for the C.D.A. headquarters.
 - (2) That the purchasing of a property suitable to house the C.D.A. and other dental organizations is logical, provided such a property became available on what, in the opinion of this Council, would be a sound business basis as to purchase and subsequent upkeep, and under such circumstances, British Columbia would support the other corporate members in proceeding with such a plan.

At a meeting of the Board of the Royal College of Dental Surgeons of Ontario, held on December 7, the following resolutions were approved:
That commencing May 1951 this Board make

CANADIAN TAXPAYERS BY OCCUPATION—1947

OCCUPATION (Arranged in Order of Average Income)	INCOME				TAX		
	Number	Average Income	Total Income (in Millions)	Per Cent of Grand Total	Average Tax	Total Tax (in Millions)	Per Cent of Grand Total
Lawyers.....	3,886	\$7,822	\$30.4	0.54%	\$2,056	\$ 8.0	1.29%
Medical Doctors and Surgeons.....	7,442	7,666	57.0	1.02	1,799	13.4	2.15
Engineers and Architects.....	1,114	7,452	8.3	0.15	1,882	2.1	0.34
Dentists.....	3,557	5,713	20.3	0.36	1,049	3.7	0.59

a grant to the C.D.A. on the basis of \$15.00 per capita.

Whereas it is the considered opinion of this Board that the early acquisition of a suitable headquarters building for the C. D. A. is urgently desirable, therefore be it resolved that a capital sum up to \$40,000 be made available by the R.C.D.S. Board for the aforementioned purpose as soon as all other corporate members agree to supply an amount on the same per capita basis.

At the annual meeting of the Dental Association of Prince Edward Island the following resolution was passed: "That our contribution to the Canadian Dental Association for the current year shall be made on the basis of ten dollars per member for all contributing members."

The above figures are taken from Taxation Statistics for 1949 as issued by the Department of National Revenue, being the first four occu-

pations listed in a table entitled "Canadian Taxpayers by Occupation—1947." The listing is arranged in order of average income.

According to the figures given, some 3,557 dentists paid income tax for the year 1947. The average income of these dentists was \$5,713, being the fourth highest for any occupation in Canada. The total income for these dentists was 20.3 millions of dollars being 0.36 per cent of the grand total of income for the year.

The average tax paid by these dentists was \$1,049 making a total of 3.7 million dollars tax paid by Canadian dentists or 0.59 per cent of the whole.

The discrepancy in the number given (3,557) and the total number of dentists practising in Canada (approximately 4,600) for the year 1947 indicates that a considerable number were not subject for taxation. Undoubtedly age accounts for a large percentage of the number whose incomes were not subject to tax.

NEWS FROM THE PROVINCES

QUEBEC

Appointment of Doctor Harvey

The Provincial Board of Dental Surgery of the Province of Quebec has announced that Dr. R. F. Harvey of Westmount has been appointed Associate Editor of the *Journal of the Canadian Dental Association* for the Province of Quebec, to succeed Dr. E. T. Bourke who has resigned.

BRITISH COLUMBIA

Vancouver and District Dental Society

The January meeting of this Society took the form of a "Home Town Talent Night". This is a popular feature of the program of the Society, presented each January. Chair and table clinics were presented as follows:

Chair Clinics—

Pedodontia	Dr. Max Nacht
Rubber Dam Technique, Class	
2 amalgam	Dr. Wm. Miller
Rubber Dam Technique, Clamp adjustments, and procedure in finishing amalgam restorations	Dr. Lloyd Jacobson
Radiodontia	Dr. John Ingledew

Table Clinics—

Orthodontia	Dr. K. Walley
Hydrocolloidal impressions for	
inlays	Dr. I. Snider
Periodontia	Dr. G. Plant
Minor Oral Surgery	Dr. G. McKenzie
Local Anaesthesia	Dr. M. McDougall
Prosthesis	Dr. John Dawson
X-ray Diagnosis	Dr. C. Whitworth
Inlay Technique	Dr. L. W. Beamish

Dental Headquarters

Combined executive committees of the College of Dental Surgeons of British Columbia, the British Columbia Dental Association, and the Vancouver and District Dental Society met recently to establish the basis of operation of the joint headquarter premises of the three organizations in Room 218 of the Medical Dental Building in Vancouver. An executive secretary will be prepared to receive all enquiries and correspondence of a dental nature, and assign them to the proper organization for attention. The cost of rental of the premises will be borne by each of the three organizations in proportion to the use each is

expected to make of the offices in its name. The cost of secretarial services and general administrative duties will be carried by each organization as in the past, but it is hoped and believed that a greatly increased efficiency and economy of operation will be achieved by this amalgamation of headquarters.

Appointment at University of Washington

Mr. Charles Schroeter, well-known proprietor of a Vancouver Dental Laboratory, has accepted an appointment to the staff of the Dental School of the University of Washington, in Seattle, as a photographer. He has long been known as an amateur photographer of high standing, and his ability in that line, coupled with his knowledge of dental laboratory technique will make him a valued member of the technical staff of the School.

Victoria Dentists at Vancouver Meetings

Drs. Jack Mercer, Arthur Poyntz and Ewart Gee, of Victoria, journeyed to Vancouver early in January to attend meetings of the combined executive committees of the Council, the B.C.D.A. and the Vancouver Society, and also of the Dental Health Committee of the B.C.D.A. and of the executive committee of the B.C.D.A. Dr. Harry Johns, also of Victoria, attended the meetings in his capacity as editor of the *News Bulletin* of the B.C.D.A.

Dental Health

The Dental Health Committee of the B.C.-D.A., at a meeting held in Vancouver in January, reviewed activities of the committee in co-operation with the Department of Health and Welfare of the Provincial Government. The long-range program of the Department, established in 1949 as a result of lengthy deliberations of the Department and the Dental Health Committee is under way, and it is hoped that the first Director of Dental Services of an established health unit will soon be appointed. Eighteen such units are to be organized eventually, covering all parts of the Province. The speed of development of this program will be in proportion to the availability of dental personnel for this type of work.

Public Relations

The Public Relations Committee of the British Columbia Dental Association has pre-

sented a program of proposed activities to the executive committee, receiving its unqualified approval. Various forms of literature will be examined, and selected articles will be submitted to the Department of Health and Welfare with recommendations for publication and distribution. An effort will be made to organize a group of speakers in various parts of the Province who will undertake to address Parent-Teachers or other similar organizations throughout the Province, to whom messages concerning dental health may be presented.

Convention of B.C. Dental Association

Preparations are well under way for the Convention of the British Columbia Dental Association to be held in Kamloops on May 5, 6, 1950. The program committee has been active in securing headliners for the meeting, and there is no lack of excellent material from various parts of the Province to supplement the leading clinicians. The location of the meeting seems to be highly popular among Island and lower mainland members. The famous hospitality of the people of the ranch country of the Interior; the opportunity of a motor trip over the newly opened Hope Princeton highway, and up through the Okanagan in blossom time, coupled with advance reports of a typical ranch style barbecue, are items that are particularly attractive, and it is expected that the accommodations at Kamloops may be strained to the limit. The railways have promised additional living quarters in pullmans spotted on the tracks in the city, so that no one need be disappointed in that respect.

ALBERTA

Lethbridge and District Dental Society

At the December 7 meeting of this Society held in the Marquis Hotel, Guest Clinicians were Dr. McIntyre and Dr. John Clay of Calgary. Each clinic was given twice and the large turn out was divided into two groups. The groups changed rooms at half time and in this way gave the clinicians a chance to speak to smaller groups. Dr. McIntyre gave a most interesting clinic on "Interceptive Orthodontics in General Practice". Dr. Clay's clinic on "Exodontia Problems in General Practice" was also well received.

The clinics were followed by a dinner at which the clinicians spoke. Dr. Burgman of

Blairmore thanked the speakers and presented them each with a book on behalf of the Lethbridge Dental Society.

MANITOBA

Manitoba Dental Association

The 1950 annual meeting of this Association was held in the Medical Arts Bldg. Club rooms, in Winnipeg, on the statutory second Monday in January. The meeting was preceded by a dinner under the auspices of the Defence Dental Association of Canada Manitoba Branch, presided over by Lt-Col. W. W. Wright, well known ranking officer in the Canadian Dental Corps in M.D. No 10 in both World Wars. The guest speaker was Lt-Col. Morgan Smith, Senior Medical Officer of Prairie Command, his subject being the up to the present topic "Medical Aspects of the Atomic Bomb". Over 60 were in attendance and when one realizes that most of the guests are veterans of the 2nd world war, this was a fine representation. Practically all of this number remained for the Dental Association meeting and with the addition of several who did not attend the dinner the numbers in attendance for a business meeting of reports ad lib. was unusually good.

Dr. Paul Cleave of Neepawa, President of the Association, was in the chair. The January annual meeting always is the occasion for an announcement of the results of an annual election of three members of the Association to the Board of Directors. The result this year was the re-election of Dr. J. Gordon Elsey and Dr. Kenneth M. Johnson and a newcomer in the person of Dr. Clifford Sifton Robertson of Dauphin who replaces Dr. A. R. Hurst of Brandon. Dr. Hurst has completed ten years' service on the Board and being President of the Western Canada Dental Society which meets in Manitoba in 1951 he decided to devote his time and energy to the latter duties.

The officers of the Association for the coming year are as follows: President, Dr. Kenneth M. Johnson, Vice-President Dr. J. Gordon Elsey, Secretary-Treasurer and Registrar, Dr. J. F. Morrison.

One of the important points unanimously agreed to at the meeting was the continuance for 1950, at least, of the payment of \$25.00 per capita due to the Canadian Dental Association.

Winnipeg Dental Society

The following are the officers of this Society for the year 1950:

President	Dr. B. A. Oja
Vice-President	Dr. J. B. Rumberg
Sec.-Treasurer	Dr. Ernest Wallace
Clinic Chairman	Dr. J. O. Brown
Committee	Dr. A. V. Johnson
	Dr. F. W. Jones

ONTARIO

Academy of Dentistry, Toronto

The dental public health committee of this Association has undertaken a project in the Western Section of the City of Toronto. At the West Toronto Dental Association meeting on January 25, the program was launched. It is expected the project will spread over the other districts of the city.

Dr. George W. Grieve

The death of Dr. George Wellington Grieve marks the passing of a great Canadian dentist. He was recognized as an authority in orthodontics and his reputation was international in scope. This was recognized in 1931 when he was elected an honorary Vice-President of the World Orthodontic Congress at London, England and again in 1940 when he was the recipient of the Albert Ketcham Memorial Award from the American Board of Orthodontics.

Dr. Grieve was born at Cobourg, Ontario, and received his early education there. He was graduated from the University of Toronto and began a general practice of dentistry in 1899. After training in the Angle School of Orthodontics in 1908 he began limiting his practice to this specialty. He was associate professor of this subject at his Alma Mater during the years 1915-18. In the years that follow he has contributed many scientific papers before dental and orthodontic meetings in Canada, United States, England, and France. He was an original thinker and undoubtedly a leader in his profession. An example of this dates back to 1920 when he began advocating the removal of teeth preliminary to undertaking corrective orthodontic treatment in certain cases of crowded dental arches. At this time such treatment was quite unorthodox but this has been accepted as good practice in later years and this concept has been included in a new book on orthodontics written by Dr. R. H. W. Strang.

Dr. Grieve, recognized as the dean of Canadian orthodontists, was a past president and honorary life member of the Toronto Academy of Dentistry; a member of the Canadian Dental Association, the Ontario Dental Association and an honorary life member of the American Society of Orthodontists. Since his death, letters of tribute and condolence have come to Mrs. Grieve from confrères far and wide. Such was the place of esteem Dr. Grieve held among his colleagues in a professional and academic sense. But he has other facets to his professional vocation perhaps best known to those who worked with him.

Dr. Harry S. Thomson was one of these, who himself an international figure in Dental Public Health, was both an intimate friend and a co-worker. He writes—

"Early in his professional career Dr. Grieve displayed a keen and active interest in dental public health education. His attitude differed from the usual, he believed that every dentist should devote some of his time,—not only time taken from his leisure or social duties, but a part of his working hours, to tell the public what the dentist knows and what the public should know about the prevention of dental diseases and the normal growth and development of the teeth and jaws. He practised this himself.

"He was one of the original group that formed the Canadian Oral Prophylactic Association, the pioneer organization in dental health education. He was active in the formation of the Canadian Dental Hygiene Council, and took a part in its program.

"In his younger days, Dr. Grieve learned the printing trade and was a compositor on newspapers in Toronto and Montreal, when type was set by hand. Perhaps because of this he was meticulous almost to stubbornness in the use of punctuation, and he greatly deplored the fact that in modern writing the comma is less frequently used; and the colon and exclamation mark seldom appears. Because of his knowledge of this and of correct sentence structure, his generously given help in the preparation of reports and educational material was of much value. The editor of the former Dental Cosmos and Dr. C. N. Johnson of the American Dental Association Journal, both told me personally that material sent in by George Grieve could go direct to the printer without editing or reviewing.



DR. GEORGE W. GRIEVE

"Our memories of him that will live are his uncompromising honesty, his loyalty to his profession and to his friends, and his constant endeavour to reach the ideal in his every task."

Dr. Grieve has made a wonderful contribution to the progress of his beloved profession and with it all he had time for other things too—recreation, his Church and his home. Until recent years he was an enthusiastic golfer, an ardent bowler and he did enjoy a day "out fishin'". In disposition he was a quiet man, sincere, fair and charitable toward his fellows. If he could not say something kindly about another, he said nothing at all. He loved his home and his associations there. The untimely death of his only son in 1938 while he was in training in the Royal Canadian Air Force, was a staggering shock from which neither he nor Mrs. Grieve entirely recovered. And now this further great loss has come to Mrs. Grieve alone.

But there is a consolation in the memory of a great life of accomplishment and comradeship; and that the loss is shared by many friends who were privileged to have known him.

Ontario Dentists' Bonspiel

The Ontario Dentists' Curling Association held its first Annual Bonspiel at Brampton, Ontario on December 14, 1949. The entry list was filled to overflowing long before the closing date of December 1 and several entries had to be refused because of lack of accommodation on the ice. Rinks were entered from Brampton, Caledon Lake, Peterborough-Lindsay, Walkerton, London, Brantford, Barrie, Orillia, Hamilton 3, and Toronto 5.

Each rink played three eight end games. The first draw commencing at 9.00 a.m. matched eight rinks. These eight were rematched again at 1.00 p.m. and 5.00 p.m. The other eight rinks were matched at 11.00 a.m., 3.00 p.m. and 9.00 p.m. As each draw progressed, winners were matched against winners and losers against losers according to their scores and the rink with the greatest number of wins and having the largest aggregate score was declared the winner of the bonspiel.

At 7.00 p.m. a banquet was held, attended by all the curlers and a number of interested guests including Mr. Fleming, President of the Brampton Club, Dean Emeritus Mason, Dean Ellis, Harvey Reid, Vernon Fisk, Lloyd Grose, Don Gullett and Harvey Bean. At the banquet, the Ontario Dentists' Curling Association was officially formed and officers were elected to carry on the affairs of the association. Charlie McKenna presented to the association a very handsome trophy, an electric clock mounted on a walnut base and surmounted with a miniature curling stone. Two curlers with brooms and stones are mounted on the base on either side of the pedestal. To the great acclaim of all present, Charlie was made an Honorary Life Member of the association, and his services in organization and his unstinted efforts on the committee were lauded in the short speeches.

Too much praise cannot be given to Ab Robinson for his efforts in the local arrangements. The club-house and rink were the association's for the day and no effort was spared or lacking to give everyone a good time, all due to Ab.

At the close of the 9.00 p.m. draw, chairman Harold Campbell presented the trophy and the prizes to the winners.

The winners of the trophy and first prize

were Cliff Mason skip, Carl Moyle, Dave Shultis, Jack Carrol of Hamilton Thistles. The runners-up and winners of the second prize were C. H. Laidley Skip, Cliff McKee, M. G. MacCartney and R. G. Scott of Peterborough-Lindsay. The winners of the largest single score game were Jack Malcolmson skip, Glen Pilkey, Lou Harris and Jay MacLaurin of Toronto Curling Club.

Also rans were:

<i>Caledon Lake</i>	<i>Toronto Granite</i>
G. H. Campbell skip	A. M. Hord skip
J. H. Duff	Bert Diprose
George Spellman	T. H. Graham
Harry Zinn	W. Jackson
<i>Brampton</i>	<i>Toronto High Park</i>
T. A. Robinson skip	C. L. Eaton skip
Frank MacLean	W. H. Linghorne
R. J. Golding	H. E. Richardson
O. A. Peaker	George Coney
<i>Hamilton</i>	<i>Toronto and High Park</i>
W. W. Baxter skip	G. V. Morton skip
Jerry Philp	Roy Hendry
Art Poag	W. Heaslip
Murray Weaver	Joe Johnson
<i>Hamilton</i>	<i>Toronto Granites</i>
Lorne Jones skip	Alex Elliot skip
Holly Dyer	Foster Elliott
Frank Serena	Vic Large
Russ Hoffman	Stuart Crouch
<i>Walkerton</i>	<i>London</i>
A. W. Irwin skip	Bill Joynt skip
G. C. Hind	Charlie Ruddell
Frank Morton	Fred Baker
E. P. Dixon	Bill Riseborough
<i>Brantford</i>	<i>Barrie</i>
J. E. Amos skip	F. S. Spiers skip
Jim Moyle	H. Armstrong
Watson Race	Jack Warnica
Ted Wentworth	E. G. Bilkey
	<i>Orillia</i>
	Alex H. MacLean skip
	Bert Gardiner
	Alex Dunn
	Bert Hughes

VIC. MORTON

Ottawa Dental Society

On December 12, Dr. James Coupland of Ottawa addressed the Ottawa Dental Society on X-ray Interpretation. The address was illustrated with slides.

Dr. W. G. Wolfe thanked the speaker.

DENTAL ASSISTANTS

It's the Little Things That Count*

- I** It's the dental assistant's job to do the little things in a dental office and do them well. If she does this she leaves the doctor's time for the more important tasks of performing dental operations.
- T** The dental assistant creates the first impression on the new patient and this must be a pleasant one. Greet him in a dignified but warm and friendly manner.
- S** Show-window to your office is the Reception Room—keep it well-aired, up-to-date magazines neatly stacked and the chairs dusted and properly placed. The principle of good housekeeping applies to the business office. Your desk should be neat and not cluttered up with papers, charts that are not being used.
- T** The telephone is a door to your office—answer it promptly. Remember not to be too brusque and not to be oversweet. Talk to the patient and not into an inanimate telephone receiver.
- H** Help a patient on with her coat if necessary and say goodbye or acknowledge in some way her departure.
- E** Every dentist has a few pet instruments—set them out when you know he will need them. Be observant and with careful watching you will learn what instruments are used for each operation.
- L** Let only the instruments necessary to the work at hand be on the tray at a time.
- I** Introduce a new patient to the doctor.
- T** The dental assistant must learn to anticipate the wants of her doctor and patient.
- T** The saliva ejector should be placed in the tubing in the presence of the patient. The same applies to a glass or water or mouth-wash.
- L** Lubricate and clean the handpieces and right angles every day.
- E** Estimates should never be given over the telephone or outside the office.
- T** Take the benefit of a discount by buying your supplies in quantity. With some products there is a considerable saving by buying a quantity.
- H** Have several sets of the same instruments so that the doctor will be kept waiting while certain instruments are being sterilized.
- I** Instruments should be kept well sharpened.
- N** Never let the engine belt break before changing it. When the belt becomes frayed in one spot change it.
- G** Give your patients instructions as to home care after an extraction. Never give the patient pills in the "free sample" envelope. This is much too impersonal.

- S** Straighten out used matrix bands before replacing in the cabinet. Always keep a MOD, MO, DO matrix band mounted ready for use.
- T** Tissue should be given a patient to remove her lipstick before the doctor begins to operate.
- H** Have you a chronic "forgetter" amongst your patients? If so, remind him by telephone beforehand.
- A** Assume the responsibility of keeping accurate records of all work done for each patient.
- T** Take time, once in a while, to sit in the operating room chair and see your O.R. as your patients see it. Do this in your reception room too.
- C** Check with each patient the date and time of his next appointment. It is your responsibility to see that he has his next appointment on a card.
- O** Other people's problems should not be discussed with patients or friends in or out of the office.
- U** Use a patient's name when speaking to him.
- N** Never leave the appointment book or records where patients can read them.
- T** Tell a patient, (if he is to be kept waiting) how long it will be before the doctor can see him. Don't say a few minutes when you mean fifteen. Apologize for the delay.

Elizabeth Brown.

Assistant to Dr. J. A. Bothwell, Toronto

MANITOBA

Winnipeg Dental Nurses' & Assistants' Association

This Association held its annual Christmas Party December 12 at Moore's. Miss Mary Mae Massey, Social Convener, arranged a grand program of games and songs. Miss Marion Smith was Miss Santa Claus.

The Winnipeg dentists were dinner guests of the Winnipeg Dental Nurses and Assistants, January 11, at the St. Regis Hotel. Dr. M. H. Garvin, the guest speaker, talked about the Dental Assistant, her training, her duties and her status. Dr. Garvin thinks "Dental Assistant" the best title.

Miss June Hardy sang two lovely solos, and we all think she has a beautiful voice.

Dr. Jack Warriner played the piano for the sing-song, and Dr. Warriner, Sr., sang a solo. The evening was one of the highlights of the season for the D.A.'s.

F. JEFFREY

*Presented at Academy of Dentistry Winter Clinic, Toronto, November 24, 1949.

EMPIRE NEWS

GREAT BRITAIN

Asking More For Health

Aneurin Bevan, Minister of Health, is expected to ask additional funds for Britain's nation-wide health service before the end of the current fiscal year. Despite the Labor Government's efforts to cut Government spending, a Conservative member of the House of Commons predicted September 4 that another £25,000,000 (\$100,750,000) would be needed. It is the Conservative view that the scope of the service will have to be cut or a charge made for the use of health service, either of which would be unpopular with the voters. In any case, it is obvious that the health service will have to be exempt from the Government's recently announced economy drive that aims at an over-all reduction of 5 per cent in spending.

Proportionately less money was appropriated for the health service this year than for the first nine months, but the demands upon it have not decreased appreciably. The figure for 1949-50 was £259,700,000 compared with £280,000,000 for the first nine months. Yet the statistics do not show that some costs, particularly salaries and hospital administration, seem to have increased. Some economies have been effected. Dentists' and opticians' fees have been reduced, and the practice of allowing two pairs of free spectacles a patient has been discontinued except where it is considered absolutely essential.

As a result of the Treasury's order that no additional appropriations would be allowed this year except in special cases, the Ministry of Health asked the management boards of state-owned hospitals to reduce their costs by £9,500,000. Some boards protested that such a cut would impair essential services. Consequently they were asked to make new estimates without reducing services to patients, which now are being prepared. Probably when Parliament reconvenes, the Conservative party will offer a measure to exclude from the free health service all foreigners except citizens of the Commonwealth and Empire and those who pay taxes in Britain. All these economies, however, are not believed to involve major amounts; hence some observers of the health service expect more money to be required before the end of the year. As to subsequent

years, Sir Stafford Cripps, Chancellor of the Exchequer, told the House of Commons last April that social service expenditures as a whole inevitably would increase over the next five or ten years.

As the rate of taxation already is near its limit, Sir Stafford said there was a "very good argument for imposing some special charge or tax in connection with health services." He said, however, that the Government would await the outcome of another year before taking any such action. That year is not yet half finished, but politicians are beginning to wonder whether the special charge may be necessary. It has been suggested that the charge may be added to 8½d (about fifteen cents) that each employed person contributes to the cost of the health service each week as part of national insurance payments. Another suggestion favoured by many Conservatives is that at least part of the costs of appliances supplied by the health service should be borne by patients.—New York Times, September 5, 1949, per Public Health Economics.

Use of Acrylic Materials in Inlays

As the result of correspondence following the Minister's ban on acrylic inlays, the British Dental Association has been informed by the Ministry that the Dental Estimates Board is willing to consider estimates for acrylic-faced inlays.

National Health Service

Ninety-five per cent of the population have chosen doctors. About the same percentage of doctors have joined the Service; i.e., about 18,000 doctors for 42,000,000 people, making the average list of a National Health Service general practitioner a little over 2,000.

The estimated cost of the whole service is about £300,000,000 or \$1,200,000,000 before devaluation of the pound. The hospital services account for more than one-half of this, which is to be expected. The original estimates were far too conservative and hopeful—only about half of the actual cost was estimated for. The hospital, general practitioner and pharmaceutical services kept within reasonable proximity of their estimates but the ophthalmic service cost seven times and the dental service three times the original estimates which shows



Australian Official Photograph by V. Gadsby

EXTENSIVE ACTIVITIES OF SYDNEY DENTAL HOSPITAL

A view of the surgery in the Rail Dental Clinic car. An average of 250 patients a week visits each of the rail clinics, 50 sets of dentures a week are made by the clinic's mechanics.

what a mad scramble there has been for glasses and teeth—all free.

Over half a million prescriptions are issued daily, or, in other words, one person in 80 of the population gets a prescription from his doctor every day. Five million free pairs of glasses have been supplied in one year, or one person in every nine of the population has received a pair of glasses in one year.

Eight million have seen a dentist, or one in every five. According to certain biased political reformers, this sort of expenditure is justifiable and should not be interfered with. According to unbiased economists drastic cuts will have to be made in the costs of the Service. They question whether the economic state of the nation can bear the burden of a Service which

costs so much.—J. A. L. Magee, M.D., Beaconsfield, Eng., in Canada M.A.J.

AUSTRALIA

Extensive Activities of Sydney Dental Hospital

Sydney (Australia) Dental Hospital, set up in 1939, is the largest and one of the most modern dental clinics in the British Commonwealth.

More than 60,000 patients a year are treated in the eight-storey building which also houses the Sydney University Dental Science Faculty School.

But general dental work is only part of the many activities of the hospital—a Sydney land-



Australian Official Photograph by V. Gadsby

EXTENSIVE ACTIVITIES OF SYDNEY DENTAL HOSPITAL

One of the two cream-painted rail dental clinic cars coupled to a train, ready to travel to a country centre of New South Wales. Inside the car all the fittings are of stainless steel; the walls are painted cream and the upholstery is green leather. Each dental car is equipped with all modern facilities for surgical, X-ray and mechanical dentistry. In addition to the two surgeries and the laboratory and X-ray dark-room, there are living quarters for the staff of two dentists, two dental mechanics and two nurses. These quarters are only used during actual travelling on the train. The purpose of the rail dental cars, which were established in 1935, is to provide dental treatment for old age and invalid pensioners and those who cannot travel to the Sydney Dental Hospital for treatment.

mark with its exterior walls mostly of glass to let in more natural light.

It also conducts the Dental Research Institute, two travelling rail clinics, special clinics for children and pre-school clinics at day nurseries and kindergartens; a special section for expectant mothers; a plastic surgery section where artificial ears, noses, eyes and facial moulds are made.

The Dental Research Institute is the leading dental research organization in Australia. Directed by Dr. N. E. Goldsworthy, the staff includes many first grade diagnosticians, scientists and technicians. Main research interest at present is the study of dental decay and its causes.

The rail clinics are a complete surgery and repair room on wheels and may be taken to any point served by New South Wales 6,128 miles of rail network.

Each of these clinics is staffed by two den-

tists, two nurses and two mechanics. They do all types of dental work free of charge.

The primary aim is to cater for old age and invalid pensioners and anyone getting any form of Government social service assistance—people who could not otherwise afford dental treatment and who could not travel to the Sydney Dental Hospital. They sometimes spend up to six months in some rural areas.

The forthcoming arrival of a rail clinic car is well advertised in all the country towns and every pensioner is advised by mail to visit the clinic if he requires dental attention.

Many of the children's clinics at the day nurseries and kindergartens are designed and furnished specially. All of them are staffed by operators used to children. They are an important factor in overcoming the dentist bogey and making young children and their parents dental care conscious.

At their special section, mothers-to-be can obtain advice about diet and receive attention

they may need before the birth of their child.

In cooperation with plastic surgeons, artificial ears, noses, eyes and facial moulds are made for needy patients at a nominal charge.

There are now 770 dental students, more than 200 of them women, at the Sydney Dental School. Many of the students are former servicemen and women.

GENERAL NEWS

Canadian Health Program

"Paul Martin, Minister of National Health and Welfare of Canada, told the American Public Health Association October 25 that under Canada's National Health Program, set up last year, more than twice as much per capita had been set aside in grants to provinces than under the admirable health grants system in the United States." He addressed a large gathering of public health workers from many parts of the United States, Canada, Mexico, Cuba, and other countries.

"Canada's total expenditure on health and welfare, Mr. Martin said, 'now approaches \$1,000,000,000 a year,' an amount he described as '\$11,000,000,000 or more in United States terms. In little over a year of full operation of our national program,' he said, 'we already can see a striking expansion of public health activity in every Canadian province. We now hope to raise health care in Canada to heights hitherto undreamed of. Everywhere there is a ferment of new ideas, new developments, new enthusiasm. We are determined to keep abreast of the advances of medical science and to be impatient and intolerant of anything that debars our people from the best of health care.'"—N.Y. Times, Oct. 26, 1949.

Hygienists in Massachusetts to Receive Training in Dentistry for Children

From Editorial in J.A.D.A., Jan. 1950

The Commonwealth of Massachusetts has revised its dental practice act within recent months to permit the State Department of Public Health to train feminine personnel to fill cavities in children's teeth under the supervision of a dentist in dispensaries or clinics.

The training course, designated at the moment as a research program, is to be given at the Forsyth Dental Infirmary in Boston. Under the present law the program is limited to a period of five years, the first two of which will be devoted to training the students and

the last three to evaluating the services rendered by the trainees. The project, financed by the Children's Bureau of the Federal Security Agency, has not been endorsed by the governing body of the Massachusetts Dental Society although the research committee of the society has approved it in principle.

Needless to say this new project is viewed with concern, not only by members of the Massachusetts Dental Society but by members of the profession throughout the entire United States. This concern is engendered first by the fact that the act provides two-level dentistry and second by the fact that the dental practice act of Massachusetts was revised without full knowledge of the profession in that state.

Cuba to Receive Fleet of New Mobile Health Clinics

A fleet of ten "health clinics on wheels" for the Cuban government which include a completely equipped dental surgery were to be delivered in December. The full program calls for a number of health caravans, each consisting of a medical-dental clinic, an ambulance, and a coach containing living quarters for a six-member team of physicians, dentists and technicians.

Six National Groups Join Forces To Improve Health of the Nation

The American Dental Association, the American Hospital Association, the American Medical Association, the American Nurses Association, the American Public Health Association and the American Public Welfare Association have joined forces for the purpose of studying and improving the public health and welfare.

Streptomycin

In the British Medical Journal of Nov. 12, 1949, it is stated that streptomycin, an expen-

sive and by no means harmless drug, may be either wasted or used in such a way as to do positive harm.

The editor goes on to say that the strongest objection to indiscriminate use is in connection with tuberculosis — "that unsuccessful treatment renders the organism completely resistant. The tubercle bacillus rarely acquires this property in less than about six weeks. Other bacteria, multiplying at a far greater rate, can acquire it within a few days or even overnight. The trial of streptomycin for a urinary tract infection, for instance, without proper safeguards can do a patient irreparable harm by placing him out of reach of even properly controlled treatment later. In time, no doubt, resistant bacteria of other species than the tubercle bacillus will be transmitted from person to person, and infections in untreated patients will be found totally resistant at the outset. It is even possible that the use of the drug will have to be altogether abandoned on this account in the not far distant future. Fortunately there is no other antibiotic or drug of any kind to which such high resistance can be acquired so rapidly, just as there is no other which can become an essential nutrient for an organism on which its previous action was destructive. This almost ludicrous transformation is now fully substantiated and known to occur in many species, including the tubercle bacillus. Nothing illustrates more clearly than this how fragile a weapon streptomycin is and how ill-defined is the boundary separating good from harm in its effects. Doctors possess in streptomycin something quite peculiar and not to be regarded in the same light as any other drug. It should be reserved for use only on the clearest indications and under the closest observation. Every patient treated unsuccessfully brings nearer the day when no patient will be able to be treated with streptomycin at all."

A.D.A. Relief Fund Contributions Set New Record

Contributions to the American Dental Association Relief Fund for 1948-49 reached a total of \$61,332.89 as of July 1 to set a new all-time record. Although the total was considerably below the \$100,000 goal set for the 1948-49 campaign, this year's contributions were \$14,241.32 in excess of the total of \$47,091.57 contributed during the previous

year. Eight state societies exceeded their quotas in the 1948-49 campaign.

U.S.A. House of Delegates Approves Recommendation to Raise Annual Dues

The House of Delegates, at the ninetieth session of the Association in October, approved a recommendation to increase active membership dues from \$12 to \$20 a year. This action was taken after due deliberation and full consideration of the Association's needs, resources and commitments. Final action on the recommendation will be taken at the 1950 session. If approved by the delegates at that time, the eight dollar raise in dues will become effective in January 1951. At the same session the House of Delegates approved a budget of \$1,305,500 for 1950 which is \$8,937 less than the anticipated income for the coming year.

Postgraduate Education by Telephone Reaches 7,000

An estimated 7,000 dentists in 39 states, the District of Columbia and Canada participated in the first nation-wide telephone extension course presented by the University of Illinois dental school. Those attending the postgraduate courses by telephone represent 142 dental societies and dental study clubs.

A Dutch Comment

Speaking in the discussion of a paper given by Doctor W. G. Senior on the British Health Service, H. Broekhuizen (*Tijdschrift voor Tandkeelkunde*) likened the dental part of the Service to "trying to drain a polder without stopping the hole in the dike." It was, he said, impossible with the British system to make the people dentally fit because the treatment given was incidental, not rational or systematic, and it was not followed up. He argued that it was "socially inadmissible" and a waste of money to attempt to make the adult population dentally fit whilst neglecting to provide complete treatment for children and adolescents. He outlined a scheme which had been in operation in Holland since 1941. This applied to 67 per cent of the population. Treatment was given in the following order, first aid, extraction of all teeth which cannot be conserved, scaling and instruction in oral hygiene, simple fillings, provision of dentures, When the patient had been made dentally fit,

any fillings subsequently required were done free provided that the patient submitted himself for examination every six months. If he did not report for examination he would be required to pay for whatever treatment was required to render him dentally fit. Obviously, Herr Broekhuizen said, nobody could be forced to attend for periodical examination but one had the right to attach conditions to the right to receive treatment at the cost of other people. Quoting an English saying, "In matters of commerce the fault of the Dutch is giving too little and asking too much," he said that in giving dental treatment to the population the British Government had been too afraid of committing the same fault as the Dutch, and went on to argue that the only solution of the social dental problem was to provide for regular examination and systematic treatment for the toddler and to follow such a system up through the various age groups.—Br. D. Jour. Oct. 21, 1949.

Palladium for Europe

The International Nickel Company of Canada reports an outstanding revival in European markets for platinum metals and that the need for such metals was augmented by a large demand for dental purposes. Europeans are using dental bridgework, it is stated, made of casting alloys containing 20 per cent to 40 per cent palladium.

America's Sweet Tooth

America's sweet tooth is one of the main reasons for this nation's enormous percentage of decayed teeth states Dr. John C. Brauer, dean of the University of Southern Califor-

nia's College of Dentistry, in the Journal of the American Dental Association. He reported that although the cause and prevention of tooth decay is controversial, there is one point of general agreement—excessive sugar consumption is a prime factor.

Dr. Brauer pointed out that it is well known that some children and adults can consume much larger quantities of refined sugars and carbohydrates than others without experiencing dental decay. He reported that he had found that diabetic children placed on low sugar diets had virtually no dental decay.

He said similar diets could be followed by most children to great advantage, but added, "Unfortunately, few children are required or are willing to follow such a disciplined dietary regimen even though large dividends would accrue."

Dr. Brauer pointed out that in addition to a low sugar diet, effective aids in reducing the incidence of dental decay include proper mastication of food and the regular use of cleansing agents such as toothbrushes and dentifrices.

Cancer Society Campaign

The Canadian Cancer Society will campaign in April 1950 for an objective of one million dollars.

"April is internationally recognized as Cancer Month and it is then that the lay education program reaches its maximum, coinciding with the fund raising activities."

Included in the objective is a commitment of \$200,000 to the National Cancer Institute of Canada in support of its fundamental research program and professional education.

You have been urged to fight and fight hard against the socialization of your profession. I would add with all the emphasis of which I am capable that you do this very thing but I warn you that this is not one of those issues which can ever be settled. Those who believe in the teachings of Karl Marx, be they socialists or communists, or just fellow liberals, will not stay down. In truth, these liberals believe not in the dignity of man but liberal in the sense that they are generous with the taxpayer's money. All of these are determined to redistribute American wealth and make paupers of all of us and they will not stop—they will not be defeated. They can only be conquered by the promotion of a true prosperity built upon production and upon surplus which we may use to promote health and happiness.

—Jonathon Forman in J. of the Ohio State D. Assoc.

IN MEMORIAM

George Wellington Grieve, internationally known orthodontist, died on January 2 at his home in Toronto after a prolonged illness. He was 79.

Dr. Grieve was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1899 and in the same year received a D.D.S., degree from the University of Toronto.

He conducted a general practice of dentistry for many years but following post graduate studies in the Angle School of Orthodontia at St. Louis Mo., he confined his practice to orthodontics in 1908. He retired in 1946. (See further Ontario News Section)

Ross Hamilton Wing of Ottawa, Ontario, aged 57, died December 1 following a prolonged illness. He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario and moved to Ottawa in 1940. Formerly he practised in London, England, and in several small towns in Western Ontario.

He was formerly active in municipal politics and served several years as mayor of Guelph. He had served overseas during World War I with the Canadian Army Dental Corps.

Arthur Burton Teakles of Sussex, New Brunswick, aged 72, died October 30, 1949. He was a well known dentist and fox rancher. He was graduated from the University of Pennsylvania in 1900. Dr. Teakles started fox ranching in 1921 and eventually gave up his practice to devote all his efforts to the fox ranch.

He is survived by his widow and one sister.

Charles Harrison McKenzie of Souris, Manitoba, aged 62, died on November 5.

Dr. McKenzie was graduated from the Chicago College of Dental Surgery in 1914 and after registering in Canada joined the Canadian Army Dental Corps, being stationed at Fort Osborne Barracks, Winnipeg. In 1919 he commenced practice in Hartney, Man., where he remained for 18 years. In 1940 he took over the practice of Dr. W. R. Cunningham at Souris, Man. later joining the Canadian Dental Corps in 1941, serving with the R.C.A.F. at Brandon and Souris.

He was a Past Master of Hartney Lodge, A.F.&A.M. Past Principal of Avondale Chapter, Royal Arch and a Past Worthy Patron of Souris and Hartney Chapters of the Eastern Star. He was a member of the Souris Kiwanis, the Canadian Legion and the Western Manitoba Dental Society.

Dr. McKenzie is survived by his widow and three daughters.

H. A. CROLL

Selby Evans Foster of Wiarton, Ontario, was killed in a highway accident on December 5.

Dr. Foster was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1897. He immediately began practise in Wiarton where he has continued until the time of his death.

He was a member of the Board of Education for a number of years. He was Mayor of Wiarton in 1911. He was a member of the Masonic Order. Dr. Foster is survived by his widow.

You had better live your best and act your best and think your best today; for today is the sure preparation for tomorrow and all the other tomorrows that follow.—Harriet Martineau.

The secret of happiness is not in doing what one likes, but in liking what one has to do.—James M. Barrie.

The men who try to do something and fail are infinitely better than those who try to do nothing and succeed.—Lloyd Jones.

Affections oculaires et oto-rhino-laryngologiques d'origine dentaire

par JEAN AUDET-LAPOINTE, M.D., Montréal

"Un fait recueilli, une observation bien faite est une pièce de l'édifice scientifique et cette pièce peut être taillée partout où l'homme souffre, s'il y a un médecin qui l'observe pour le soulager et le guérir."

(Amédée Latour)

"Si une observation n'est pas toujours intéressante à présenter, elle saurait toujours profiter à quelqu'un."

(Prof. Anselme Léger.)

Considérations générales.

Lors de son passage à Montréal, le Dr C. N. Johnson, de Chicago, réputé le père de la science dentaire moderne, insistait sur l'hygiène dentaire dans une causerie improvisée et la conclusion suivante s'imposait: une dentition défectueuse constitue un foyer d'infection des plus dangereux pour l'organisme. On lui attribue particulièrement des troubles de l'estomac et des infections intestinales, des rhumatismes et des désordres du système nerveux. Peut-être considère-t-on les dents plus coupables, quelles ne le sont en réalité, mais on peut affirmer qu'une mauvaise dentition prédispose à une foule de maladies, plus ou moins graves, même si elles ne sont pas la cause directe et unique. Les maladies des dents occupent une large place dans les affections oculaires et oto-rhino-laryngologiques et c'est un devoir de tout médecin de faire examiner et traiter les dents convenablement. Pour obtenir ce résultat, il va sans dire qu'une coopération intelligente doit exister entre le médecin praticien, le chirurgien, le spécialiste et le stomatologiste ou le dentiste. Une douleur dans l'oreille, dans le nez ou dans la gorge est un des symptômes les plus fréquents,

pour lesquels le spécialiste est consulté. On peut trouver la douleur là où elle est ressentie évidemment, où elle se trouve, mais bien souvent elle est irradiée ailleurs. L'irritation d'un nerf sensitif peut produire une douleur aiguë dans une de ses branches éloignées, quoique le siège réel de l'irritation ne soit complètement invisible. Voici une otalgie qui peut bien provenir d'un furoncle du conduit auditif externe ou d'une otite suppurée; mais elle peut bien être la conséquence d'une amygdalectomie, la douleur, dans ce cas, étant souvent ressentie dans l'oreille plus fortement que dans la gorge. De même l'amygdalite aiguë est souvent accompagnée d'une otalgie violente et que dire d'un symptôme fréquent du cancer du larynx, se traduisant encore par une douleur d'oreille. La cause la plus fréquente d'une otalgie réflexe doit être recherchée dans une infection dentaire, laquelle ne donne souvent aucun symptôme subjectif; lorsque l'otologiste a recherché partout la cause de cette douleur, il n'a pas fait son devoir s'il n'exige de son confrère un examen dentaire soigné et complet et un traitement approprié. Mais si on nous consulte souvent pour une douleur d'oreille dont

l'origine est une infection dentaire, il peut fort bien arriver le contraire. Le dentiste peut bien se trouver en présence d'un malade souffrant de névralgie dentaire d'origine auriculaire. Le cas est rapporté par le Dr Bigelow, de Providence, qui, après avoir fait extraire deux molaires gênantes et n'obtenant aucun résultat au point de vue douleur, recommanda le malade à un confrère otologiste, qui se trouve en présence d'un abcès de l'oreille moyenne. Le pharynx, la région de l'os hyoïde peut être le siège de douleurs réflexes d'origine dentaire. On rapporte aussi la guérison d'un malade atteint d'une névralgie dentaire avec tic douloureux de la face dû à une racine dentaire infectée ancienne. L'importance de l'infection dentaire dans les maladies des yeux, du nez, des oreilles du pharynx et du larynx n'est plus à démontrer et toute la thérapeutique est impuissante souvent, si elle n'est pas dépistée et proprement traitée.

"Il est fort probable que les sources d'infection bucco-dentaires, si abondantes, si virulentes, si permanentes, jouent un rôle important dans une foule de maladies internes, d'intoxications aiguës ou chroniques, qui peuvent atteindre les tissus et les fonctions de l'oeil ou tout autre organe. Mais il est généralement malaisé de déceler la part principale ou réduite de l'origine dentaire dans l'addition. Les probabilités pathogéniques et les trajets de ces infections microbiennes ou toxémiques sont discutables; mais ce qui est indiscutable, c'est la nécessité de ne pas nier devant l'évidence l'étiologie dentaire et l'urgence de la suppression du corps étranger infectant et irritant. Autrefois, on supprimait trop de dents; actuellement on peut tomber dans l'excès contraire. On conserve trop de dents périlleuses pour la vue, quelque fois pour la vie. Certaines de ces dents sont d'autant plus dangereuses que le dentiste et le patient les ont parfois d'un commun accord enfermées dans des boîtes d'or coûteuses et d'une ostentation provocante, dérisoire, véritables boîtes de conserves qu'on hésite à détruire même avariées, sans parler de pilotis quelquefois décomposés ou kystifiés." A. Terson.

Nous n'avons pas à discuter leurs avantages pratiques et leurs inconvénients comparés, mais il faut admettre qu'il n'offrent pas toujours la sécurité d'une prothèse métallique amovible, aseptisable sur gencive sure. Il est un grand nombre de maladies de la spécialité, qui sont la conséquence d'une infection locale. Tout endroit où les germes et leur toxines se développent, tels la bouche, le nez, les sinus, les dents, les gencives, les amygdales, le poumon, la prostate, peut devenir un foyer d'infection d'où naîtront un grand nombre de maladies. Des expériences en anatomo-pathologie nous démontrent que ces microorganismes ont une affinité particulière pour tel tissu ou tel organe et si on injecte aux animaux des cultures préparées de ces lésions, on reproduit les mêmes lésions dans les mêmes organes. Je n'ai pas l'intention, ni la prétention de venir défendre ou condamner la conception théorique de l'infection focale, qui est une question tout à la fois des plus nouvelles, des plus anciennes et des plus discutées. L'amygdale fut le premier foyer d'infection, dont on a parlé, et l'origine dentaire ne fut admise que plus tard. On peut citer parmi les maladies consécutives aux lésions dentaires; l'arthritisme, l'ulcère duodénal et gastrique, la myosite, l'appendicite, l'infection des voies biliaires, l'artério-sclérose, la myélite transverse, la néphrite, la cystite, et plusieurs affections de la spécialité, telles que conjonctivite, kératite, iritis, panophtalmie, sinusite, mastoïdite.

"Les accidents orbitaires sont les plus connus. Ici le drame oculo-dentaire est éclatant, car il se termine par la cécité le plus souvent, ou par la mort. Il ne s'agit pas des accidents résultants des sinusites aiguës venues ou non d'une infection dentaire. Tous les sinus osseux sont périorbitaires et leur infection est une menace immédiate pour l'orbite dont l'invasion a des conséquences forcées. Mais sans sinusites, nous avons vu, en bientôt quarante ans d'ophtalmologie, un trop grand nombre de phlegmons, de phlébites orbitaires d'origine buccale. Le phlegmon orbitaire se localise; il tue rarement, mais il éborgne le malade en pro-

voquant une cécité totale par compression et infection du nerf optique, qui, même avec le traitement opératoire et anti-infectieux le plus précoce, voire même avec une extrême atténuation du pblegmon orbitaire ainsi obtenu, se termine fréquemment par l'atrophie complète du nerf optique réduit à un cordon fibreux. Les cas de guérison sont des plus rares et concernent des pblegmons latéraux de l'orbite. La phlébite orbitaire est encore plus grave, parce qu'elle devient presque toujours orbito-crânienne et mortelle. Ordinairement la phlébite provenant de la mâchoire supérieure gagne l'orbite et le cerveau, d'avant en arrière; celle de la mâchoire inférieure passe dans le crâne par le plexus ptérygoïdien, le trou ovale, et petit rond et le sinus caverneux est directement infecté. Plusieurs autopsies ont démontré ces deux variétés, l'une centripète et ascendante, l'autre centrifuge et descendante de phlébite orbito-crânienne ou crânio-orbitaire, mais dans les deux cas, que l'infection soit allée dans l'oeil par le grand escalier ou par l'escalier de service, il n'en est pas moins vrai et admis que l'infection se propage aux veines optico-rétiniennes des deux côtés. La double exophtalmie montre à distance l'infection des sinus intra-crâniens. Le malade n'a pas cependant la cécité brusque, écrasante, que provoque d'un seul côté, il est vrai, le pblegmon de l'orbite. Il meurt de sa phlébite et voit jusqu'à l'agonie. A côté de ces terminaisons funestes, les simples troubles oculaires d'origine dentaire paraissent moins pressants, moins évidents et plus discutables. Il y a cependant des kératites, des irido-cyclites, des neuro-rétinites, des amauroses permanentes intermittentes, des troubles réflexes, larmoiements, blépharospasmes, contractures ou paralysies qui cèdent plus ou moins vite au traitement étiologique dentaire. Le résultat est quelquefois d'une rapidité à peu près expérimentale." Ces quelques lignes qui précèdent suffisent amplement, je crois, pour démontrer et vous convaincre de l'importance considérable d'une infection dentaire négligée.

Observations cliniques.

1) *Ostéite du maxillaire simulant une otite avec mastoïdite.* (Cas personnel.) Madame R., âgée de 30 ans, souffre d'otalgie violente, depuis quelques jours. Appelé en consultation par un confrère de la campagne, ayant déjà appliqué le traitement d'usage et craignant une mastoïdite, je le rassure et confirme son diagnostic d'otite moyenne aigue. L'otoscopie révélait des signes d'otite catarrhale: congestion tympanique (myringite), effacement, enfoncement, rétraction du manche du marteau, absence du reflet lumineux, mobilité de la chaîne des osselets réduite, pas de gonflement manifeste, pas de température, ni douleur dans la région du pavillon ou mastoïdienne à ce moment. Ces signes d'obstruction tubaire, d'état catarrhal de l'oreille moyenne persistant depuis quelques jours, sans aggravation, sans fièvre, n'empêchant pas la malade de vaquer à ses occupations ordinaires, ne semblaient être d'un mauvais pronostic. Je préviens mon collègue d'un abcès probable de l'oreille moyenne; je lui conseille de continuer un traitement résolutif, de surveiller de près sa patiente et de me donner de ses nouvelles le plus tôt possible. Je recommande aussi un examen dentaire minutieux; une radiographie est conseillée, si la malade peut venir à la ville. La patiente suit exactement son traitement, mais néglige de voir son dentiste et n'a pas fait faire de radiographie. Je revois la malade huit jours plus tard. L'otite évolue depuis quinze jours sans amélioration avec les mêmes symptômes; il n'y a pas de voussure tympanique, l'audition est légèrement diminuée, mais il existe une vascularisation plus intense; j'hésite à pratiquer une paracentèse; une ponction exploratrice élimine l'otite suppurée; je crois plutôt à l'évolution d'une otite catarrhale chronique, qui d'ailleurs s'est déjà produite à plusieurs reprises et n'a jamais guéri complètement. Quelques jours après, j'apprends que la malade s'est fait extraire une dent de sagesse malade. Nous étions bien en présence d'une réaction inflammatoire d'origine dentaire secondaire; malgré le traitement médical et dentaire, l'otalgie persiste tou-

jours. Vers le milieu de la troisième semaine, je suis appelé de nouveau d'urgence. Il existe une douleur intolérable, que les calmants n'améliorent pas; cette otalgie est accompagnée de douleur mastoïdienne; toute la région cervicale est extrêmement sensible; on note un trismus prononcé et une forte élévation de la température, et les lésions tympaniques n'ont pas changé d'aspect. Je recommande l'hospitalisation immédiate et une radiographie de la mastoïde et du maxillaire. La radiographie donne des signes d'ostéite suppurée du maxillaire. Confiée au chirurgien consulté et demandé par la famille à son arrivée à l'hôpital, l'opération pratiquée, la patiente quitte l'hôpital, guérie, huit jours après.

2) *Névrite optique.* (A. Terson.)

Le 24 sept. 1926, Mad. A., âgée de 22 ans, m'est amenée, par le Dr Montsart, oto-rhino-laryngologiste, qui soigne son mari pour une laryngite non syphilitique. Accompagnant son mari à la clinique, elle s'est plainte d'y voir mal de l'oeil droit, depuis deux jours seulement, et a demandé l'adresse d'un ophtalmologiste. Je constate rapidement que l'oeil gauche a une vision normale et ne présente aucune altération interne ou externe, tandis que l'oeil droit a, en effet, une vision si mauvaise, qu'elle peut à peine, à trente centimètres tout au plus, voir passer les doigts, sans pouvoir les distinguer, les compter. Or la malade affirme que cet oeil voyait parfaitement jusqu'au mardi 21 sept., soit trois jours avant. Ce jour-là, au lever, le voile qui n'a cessé, de s'épaissir, gênait la vision de ce seul oeil. L'ophtalmoscope montre immédiatement les plus graves lésions du fond de l'oeil. Il existe une névrite optique des plus intenses; le disque optique est remplacé par un monticule rouge à veine tortueuse. La rétine est très oedématisée et présente plusieurs plaques hémorragiques. Tout cela explique surabondamment la chute visuelle. D'autre part, il n'y a aucun phénomène orbitaire inflammatoire. L'oeil lui-même n'est pas rouge et s'ouvre bien comme l'autre. La compression, la palpation est légèrement douloureuse. Le côté droit de la face est un peu plus sensible, depuis deux ou trois jours. Il n'y

a pas de fièvre. L'interrogatoire ne découvre aucun antécédent général personnel ou héréditaire, auquel on puisse accrocher une étiologie, mais l'examen du voisinage est surtout et autrement intéressant. C'est quand nous arrivons aux dents que la malade commence à s'agiter, et me déclare qu'une de ses dents, la deuxième prémolaire supérieure droite, l'inquiète et me raconte ce qui suit. Dans les premiers jours d'août, un mois et demi environ, avant l'accident oculaire, elle a revu son dentiste au sujet de cette dent, depuis longtemps très cariée, et qu'elle voulait faire supprimer. L'en ayant dissuadée encore, le dentiste a dévitalisé cette dent, puis l'a remplie d'un amalgame. Mais au lieu de se tenir tranquille, cette dent est restée douloureuse et n'a cessé de tourmenter la patiente. Je vois que la gencive est un peu gonflée, la pression sur la dent et la racine pénible, mais je n'en fais pas sortir de pus. Cependant la présence de cette dent insupportable et infectée du même côté que la névrite optique unilatérale, apparue peu après les recrudescences dentaires, m'oblige à penser à l'étiologie dentaire comme prépondérante et j'exige l'ablation de la dent. Malgré quelque septicisme, le dentiste l'enlève, le 27. Les événements se précipitent alors, dans le sens le plus favorable et le plus logique. L'amélioration de l'acuité visuelle se manifestait dès le surlendemain. On pouvait enfin la mesurer, le fond de l'oeil se dégageait, et le nerf optique reprenait son aspect normal, peu à peu, en même temps que les hémorragies se résorbaient graduellement; trois semaines après l'ablation de la dent, cet oeil avait regagné une acuité visuelle sensiblement normale."

3) *Iritis aigue d'origine dentaire.* (Cas personnel.)

M.A.P., 28 ans, se présente pour douleur, rougeur, larmolement et photophobie de l'oeil gauche. Ce malade est traité par son médecin depuis 15 jours, sans aucune amélioration. Il continue lui-même son traitement, durant les quinze jours suivants. Le malade revient consulter, un mois après, et l'examen révèle des signes d'iritis aigüe intense,

avec baisse considérable de l'acuité visuelle.

Antécédents personnels; rhumatisme polyarticulaire, il y a 11 ans, et rougeole dans l'enfance.

Antécédents héréditaires; père mort de maladie de cœur. Mère en bonne santé. Dix enfants, cinq de morts, dont un de diabète et cinq vivants en bonne santé.

Le malade suit son traitement, jusqu'au 23 février 1931, date de son hospitalisation, étant donné le pronostic réservé de l'affection. L'examen médical pratiqué par le Dr E. Ménard, de Notre-Dame, ne révèle rien de particulier au point de vue cardiaque et pulmonaire. Pas d'albuminurie. L'examen en dermato-syphyligraphie, fait le Dr Boulais, est négatif, malgré trois examens de sang et réactivation. La maladie évolue toujours sans amélioration réelle et même s'aggrave à deux reprises. La malade ne voit plus rien, souffre cruellement. C'est alors qu'un examen pratiqué par le Dr L'Archevêque, aidé d'une radiographie, nous démontre l'existence d'une dent infectée, avec abcès péri-dentaire latent, dent avariée et dévitalisée que le malade conservait patiemment depuis au moins six mois. Depuis l'extraction dentaire et le drainage alvéolaire, le malade se porte de mieux en mieux et quitte l'hôpital, le 13 mars 1931, en voie de guérison, la vision étant remontée à $\frac{1}{2}$ et le douleurs ayant cédé rapidement au traitement radical.

4) *Névrite optique et sinusite d'origine dentaire.* (N. H. Lagrange et Mathieu.)

Une malade, qui était soignée pour caries dentaires multiples, vient consulter parce qu'elle présentait, depuis quelques jours, des douleurs au niveau de l'hémiface et de l'hémicrâne droit sans troubles de la sensibilité. Au point de vue oculaire, l'œil droit, seul, atteint, présentait une baisse de l'acuité visuelle, un champ visuel rétréci, et à l'examen du fond de l'œil, un aspect typique de névrite optique. En cinq jours, la vision de ce côté disparaît complètement. L'examen radiographique, fait alors, montra une opacité très accentuée du sinus maxillaire, dont la trépanation fut décidée d'urgence.

Elle permit d'enlever un véritable bourbillon du volume d'un haricot. La vision est revenue normale à l'œil droit en deux mois.

5) *Mastoïdite d'origine dentaire.* (Cas personnel.)

Le 13 mars 1928, Mlle H., âgée de 21 ans, téléphoniste, vient me consulter, à mon bureau, pour une douleur intense et persistante de l'oreille droite, survenue à la suite d'une extraction dentaire récente, pratiquée deux jours auparavant. Des douleurs névralgiques sont apparues d'abord, douleurs sinusales frontales et maxillaires précédant l'apparition de l'otalgie. L'otoscopie révèle des signes d'otite moyenne catarrhale aiguë; vascularisation intense de la membrane tympanique et surdité. L'examen du nez et de la gorge ne révèle rien de particulier; aucun signe d'angine ou rhinite et pas de fièvre. Le traitement d'usage est prescrit: pansements humides chauds, glycérine phéniquée, pommade nasale, et la patiente est rassurée, en lui disant qu'il existe un peu de congestion de son oreille, causée par son extraction dentaire et on lui demande de revenir, le lendemain, ou de prévenir aussitôt, si aggravation. Le 14, aucune amélioration. L'otite suit son cours et semble évoluer vers la suppuration. Le 15, je suis appelé d'urgence pour des douleurs intolérables avec frissons et fièvre. L'otite suppurée est constituée et même s'accompagne de réaction mastoïdienne. Je pratique une paracentèse, sous anesthésie générale, et je prescris: bains d'oreille, solution boricquée et oxygénée, instillation liqueur Van Swieten, pantopon au besoin, glacé en permanence, vaccin et sulfate de soude. Du 15 au 27, je revois la malade trois fois. L'otite semble évoluer vers la guérison, les douleurs ont diminué, il existe une suppuration abondante et la température s'est atténuée graduellement. Le 29 mars, nouvelle douleur et température, le soir; la suppuration a considérablement diminuée et l'examen révèle des signes de mastoïdite. Le 30, je propose une paracentèse, s'il n'y a pas d'amélioration, et l'hospitalisation est recommandée. Le 31, légère amélioration, qui persiste jusqu'au 4 avril; l'examen révèle des signes de

mastôidite avec abcès sous-périosté et abcès cervical. L'opération est pratiquée, le 5 avril. Les suites opératoires sont normales et la malade quitte l'hôpital guérie, quinze jours plus tard.

CONCLUSIONS

L'infection dentaire est toujours dangereuse et elle doit toujours être recherchée pour éviter des désastres organiques des plus funestes. Malgré l'opinion générale, l'infection dentaire se manifeste le plus souvent, sans suppuration, et ses conséquences morbides sont plutôt dues à une intoxication générale qu'à une infection; mais le mal n'en est pas moins redoutable parce qu'ignoré.

L'infection dentaire est bien souvent la cause première de bien des maladies; dans bien d'autres cas, elle joue un rôle sûrement prépondérant.

Les vieilles croyances aux affections oculo-dentaires, malgré les erreurs, les fantaisies, les exagérations, contiennent donc une part de vérité. Il est, en effet, des larmolements, des contractures, et des paralysies, des névrites, des amblyopies, des infections oculo-dentaires orbitaires d'origine dentaire. On perd la vue, on meurt même d'une phlébite orbito-cérébrale, après suppuration péri-dentaire ou extraction dentaire inoppor-

tune. Raison de plus pour engager les négligents à améliorer l'état de leur bouche.

Qu'il s'agisse d'érosion, de carie, de pulpite, d'ostéo-périostite suppurée, de prothèse mal supportée et surtout d'extraction dentaire, l'influence des dents sur l'oeil est extrêmement importante. La dentition amène de la photophobie, de la congestion conjonctivale, du strabisme chez les petits enfants. Recherchons l'étiologie dentaire infectieuse ou réflexe dans le blépharospasme, la blépharite, les névralgies oculaires, les abcès de la paupière inférieure, les larmolements, que rien n'explique, les kératites, les iritis, les suppurations du vitre, les névrites optiques, les crises de glaucome, les amblyopies après abcès ou opérations dentaires.

Les angines de Vincent sont souvent la conséquence d'une infection dentaire. L'amygdalite chronique, le catarrhe tubaire et pharyngé accompagne souvent une dentition défectueuse. Emerson, de Boston, attribue une forte proportion de surdité et de bruits d'oreilles, qu'ils soient dus à des lésions de l'oreille moyenne ou interne, à l'infection dentaire. Enfin, dans 50% des sinusites maxillaires, l'infection dentaire est la cause déterminante.

300 Carré St-Louis



La Grande-Bretagne manque de dentistes

Le Dr Frank C. Wilkinson, directeur de l'Hôpital dentaire de Manchester, a informé l'Université de Californie, au cours d'un voyage aux Etats-Unis, que le manque de dentistes se faisait sentir actuellement en Angleterre en raison de l'insuffisance des Ecoles dentaires.

Le Dr Wilkinson, qui a étudié les méthodes américaines d'enseignement, estime que les Ecoles dentaires anglaises, bien que très fréquentées, sont trop restreintes: à l'Ecole dentaire de Manchester, par exemple, on ne compte que 200 étudiants. Certains membres du corps enseignant pensent qu'on pourrait doubler ce nombre en agrandissant les emplacements réservés à l'enseignement de la chimie, de la physique et de l'anatomie, que les étudiants en médecine dentaire fréquentent en même temps que les étudiants en médecine.

Médecine et Hygiène, 15 novembre 1949.

Dans le monde dentaire

Faits marquants de la réunion de 1950.

La réunion annuelle de l'A.D.C. se tiendra, cette année, à Toronto, du 15 au 17 mai, conjointement avec la réunion de l'Ontario Dental Association, à l'Hôtel Royal York. Le programme en a été élaboré par le Comité du Congrès, sous la direction du docteur C. H. M. Williams.

Thème du Congrès:

"Prévention et Conservation"

Voici quelques items importants organisés de cette réunion:

Organisation spéciale

Célébration du soixante-quinzième anniversaire du début de l'éducation dentaire, au Canada.

A l'occasion de cet événement, le programme pour la dernière demi-journée de la réunion a été confié au personnel de la Faculté dentaire de l'Université de Toronto et se déroulera dans l'Ecole Dentaire.

Conférenciers:

Dr Hermann Becks, de l'Université de Californie, San Francisco.

Sujet: "Elaboration et maintien de la santé des tissus buccaux".

Dr L. S. Fosdick, de l'Université Northwestern, Chicago.

Sujet: "L'emploi des méthodes d'hygiène buccale dans le contrôle des caries dentaires".
Dr John T. Thompson, de l'Université Northwestern, Chicago.

Sujet: "L'utilisation de la position de repos de la mandibule, dans toutes les phases de la dentisterie restaurative".

Cliniques répétées:

Dr. Victor L. Steffel, de l'Université Ohio State.

Sujet: "Prothèse partielle amovible et questions connexes".

Dr Robert E. Moyers, de l'Université de Toronto.

Sujet: "Le diagnostic au service de l'orthodontie pour le praticien général."

Dr Hermann Becks, de l'Université de Californie.

Sujet: "Prévention pratique".

Dr Gerald Racey, de l'Université de Montréal et McGill.

Sujet: "Diagnostic et le praticien général".

Dr Douglas Richardson, de l'Université McGill.

Sujet: "L'endodontie au service du praticien général."

Lt.-Col. K. M. Baird	} Corps Dentaire Royal Canadien
Lt-Col G. B. Shillington	
Major B. P. Kearney	

Sujet: "Examen et plan de traitement".

Dr J. Arthur Renaud, de l'Université de Montréal.

Sujet: "L'amalgame: son évolution et la meilleure méthode de s'en servir".

Dr H. M. Worth, de l'Université de Toronto.

Sujet: "Quelques aspects de la radiographie dentaire".

Dr Scott Hamilton, de l'Université d'Alberta.

Sujet: "La chirurgie buccale au service du praticien général".

Dr Felix French, Ottawa.

Sujet: "Modèles d'occlusion."

Dr Edward Bilkey, de l'Université de Toronto.

Sujet: "Maintien d'espace inter-dentaire".

Dr W. G. McIntosh	} de l'Université de Toronto (sous les auspices de l'Ontario Dental Public Health Committee)
Dr W. J. McGanity	
Dr Rarry Ebbs	
Dr E. W. McHenry	

Sujet: "Nutrition pratique dans l'exercice de la dentisterie quotidienne".

Orateurs à des diners:

M. John Fisher, de la Canadian Broadcasting Corporation.

Sujet: "L'éducation dentaire, au Canada."

Dr Harvey W. Reid, président du Comité de l'Assurance-Santé de l'A.D.C.

Sujet: "Situation actuelle de l'assurance santé".

Résolutions reçues

de différentes provinces.

A une réunion du Conseil du Collège des Chirugiens-Dentistes de la Colombie Britannique, tenue le 26 novembre 1949, la résolution suivante a été adoptée:

"Le Conseil est d'avis:

1) Que, sujet à l'approbation des autres provinces, la ville de Toronto soit considérée comme le site idéal et logique pour les quartiers-généraux de l'A.D.C.

2) Que l'achat d'un local pour abriter les bureaux de l'A.D.C. et d'autres organisations dentaires est logique, à condition qu'une telle propriété puisse être acquise à des conditions qui, selon l'opinion du Conseil, satisfaisaient à une saine administration d'affaires, tant qu'à son achat et à son entretien; dans ces circonstances, la Colombie Britannique supporterait les autres provinces dans l'accomplissement de ce projet."

A une réunion du Conseil du Collège Royal des Chirugiens-Dentistes d'Ontario, tenue le 7 décembre 1949, les résolutions suivantes furent approuvées:

"Commençant en mai 1951, le Conseil décide de hausser la contribution individuelle annuelle à l'A.D.C. à \$15.00, par tête,"

ATTENDU que l'acquisition d'un édifice pour abriter les locaux de l'A.D.C. est urgente et désirable, le Conseil décide de mettre à la disposition de l'Association un capital de \$40,000, dans ce but, aussitôt que les autres provinces consentiront un montant égal, au pro rata du nombre de leurs membres".

A une réunion annuelle de l'Association Dentaire de l'Île-du-Prince-Edward, la résolution suivante fut acceptée: "Il est décidé que la contribution à l'A.D.C., pour l'année courante, soit de dix dollars, par membre."

Fédération Dentaire

Internationale: Rectification.

Nous avons publié il y a quelque temps les résolutions votées à la dernière Session de la F.D.I.

L'une d'elles avait trait à la définition de "l'ODONTOSTOMATOLOGIE." Le texte adopté se terminait par le terme "Branche de la Médecine". Ce terme pouvant laisser croire une prise de position de la F.D.I. dans les questions de doctrine, le Bureau d'accord avec la Commission intéressée, a décidé de substituer à ces termes, ceux de: "Branche de l'Art de Guérir".

Situation de la dentisterie d'Etat, en Angleterre

M. A. E. Rowlett, bien connu ce côté-ci de l'Atlantique, a préparé le résumé suivant au sujet de la dentisterie d'Etat, telle qu'établie aujourd'hui, en Angle-

terre. Cet énoncé est d'autant plus significatif qu'il renferme certains aspects, qui ne sont pas bien compris au Canada. Ces divers aspects permettent de saisir la portée des événements récents au sein du Service de Santé Nationale Anglais. Quelques lecteurs ne saisiront peut-être pas le sens des "1921," cette expression signifie le nombre des dentistes enregistrés, quand la Loi Dentaire 1921 fut mise en acte. Ces dentistes ne possèdent pas de qualifications universitaires. Ci-après le document:

Situation de la dentisterie, en Angleterre, aujourd'hui. Mécontentement actuel (juillet 1949)

"Les choses sont ce qu'elles sont, décrivons-les, comme nous le pouvons, et leurs conséquences seront ce qu'elles seront; prophétisons à leur sujet, à volonté; nous nous devons d'être des témoins impartiaux des événements sociaux, avant d'être des réformateurs consciencieux de faussetés sociales."

Faits sociaux

Il est une constatation évidente, c'est que le Service de Santé Dentaire ne satisfait ni le Gouvernement, ni la profession, ni la population. Il y a donc des raisons pour ce mécontentement général; essayons de les trouver sans passion et partis pris. Commençons par ce qui affecte tout individu de la communauté, dans ses activités personnelles, professionnelles, commerciales, civiles, nationales ou internationales.

A. Pauvreté de la Nation

L'Angleterre, après la guerre, n'était pas une nation pauvre; elle était une nation frappée par la pauvreté. Des peuples pauvres, comme la Norvège ou le Danemark sont faits à la pauvreté. La vie et le pays sont ajustés à cette pauvreté. La pauvreté d'après-guerre de l'Angleterre s'est abattue sur le pays, en produisant un choc immense, selon des observateurs avertis.

Conséquences de A.

Point de vue de l'homme à l'aise:

1. Toute la nation avait l'impression d'être riche et cette conception était en rapport avec l'éducation et l'expérience. La majorité de la population, cependant,

a trouvé difficile à s'ajuster à cette nouvelle situation.

Ambiance d'homme à l'aise:

2. L'Angleterre, pour plus d'un siècle et demi, avait été un pays très riche et l'ambiance était en rapport avec cette richesse; en autres mots, voici une nation pauvre vivant dans un pays fait pour gens riches, des gens pauvres vivant dans des maisons construites pour des riches; nous étions habitués au confort de la civilisation et maintenant nous nous voyons privés des agréments de cette même civilisation (automobiles, charbon, électricité, voyages, abondance de bonne nourriture, etc.)

B. Surpopulation

L'Angleterre avec l'Irlande du Nord, comme unité pourvoyant à ses propres besoins, est surpeuplée. La population de l'Angleterre est de 49,748,000 âmes et sa superficie est de 89,041 milles carrés, donnant une population de 558 par mille carré. Par nos propres moyens, nous pouvons nourrir 35 millions d'individus.

Des statistiques d'autres pays sont intéressantes et instructives:

Etas-Unis	45	au	mille	carré
Canada	6	"	"	"
Danemark	237.	"	"	"
France	192	"	"	"

Carence de terres arables—Notre rendement agricole est surtaxé et nous vivons grâce à la générosité des Etats-Unis et du Canada et des autres Dominion et Colonies, à raison de 4 à 5 millions de dollars, chaque jour. N.B. Notre dette est calculée en dollars et non en livres sterling.

C. Le gouvernement travailliste

Le gouvernement est passé dans les mains de ce qui peut être décrit comme la masse, c.-à-d. les unions ouvrières. On peut dire que ce phénomène doit être regardé comme une évolution et non une révolution, puisqu'il est une conséquence de l'éducation.

Nature évolutive du gouvernement actuel

Si cette conception est juste, elle n'est pas réversible, c.-à-d. que nous ne pouvons pas nous attendre à un retour des gouvernements conservateurs ou libéraux,

mais, dans l'avenir, nos gouvernements seront travaillistes "gauches" ou seront travaillistes "gauche" ou "droits". Plus on possède, plus nos responsabilités augmentent.

En autant qu'aucune démocratie ne peut durer et prospérer sans l'éducation de ses électeurs, il est du devoir de ceux, qui ont l'avantage, d'être instruits de renseigner ceux, qui n'ont pas les mêmes privilèges.

Définition de la démocratie

Une démocratie est un état de la société dans laquelle nous avons, non pas la permission de faire ce que nous voulons, mais la liberté de faire comme nous devrions.

Sanctions appropriées pour une conduite anti-démocratique—Si nos actions ne sont pas en rapport avec nos devoirs, nous perdrons notre liberté et une dictature communiste ou militaire guidera nos destinés.

Les idées énoncées plus haut sont basées sur les faits et doivent être soumises à la lumière de la raison pour être jugées à leur valeur et critiquées avant de les rejeter ou les accepter.

La situation des dentistes

Avant d'étudier la situation faite aux dentistes, il faut s'entendre sur la signification du terme "dentisterie". Deux définitions sont possibles.

Définition de la dentisterie

1) La dentisterie est un art basé sur une science, faisant partie intégrale du Service de santé, c.-à-d., qui s'occupe directement des dents et des tissus adjacents, indirectement de l'organisme en général. Cette définition en est une "ad hoc", pour clarifier les rapports médico-dentaires.

Le champ d'action de la dentisterie

2) La dentisterie est un Service de la Santé, s'occupant spécifiquement de l'établissement du maintien, de la restauration et de l'amélioration de la santé, du côté fonctionnel et esthétique de la cavité buccale et de ses parties environnantes, dans leurs relations avec l'organisme en général.

Cette définition renferme la reconnaissance des signes buccaux de maladies

organiques, la prévention et le traitement des maladies buccales, des blessures, des malformations et des déficiences de celle-ci; la réparation des dents, dont l'état altéré par la maladie ou des accidents, et leur remplacement, quand elles sont perdues.

Le champ d'action de la dentisterie est donc comparable à ceux de l'ophtalmologie, la laryngologie, l'otologie et la dermatologie; et ses répercussions et son importance sociale pour le moins aussi grandes.

Il s'ensuit, donc, de la définition, qui précède, et des commentaires du 3ième paragraphe, que la dentisterie moderne peut s'appeler Odonto - Stomatologie, branche de la Médecine. L'Angleterre est en face de ce paradoxe d'un surpeuplement desservi par un nombre diminué de travailleurs industriels et professionnels.

Personnel dentaire

D'après le rapport du Comité Taviot, le nombre de dentistes enrégistrés le 31 décembre 1942 est de 15,192, dont 12,812 en clientèle privée ou au service de gouvernements locaux. Au nombre de ceux-ci, un tiers représentait 1921 dentistes.

En juin 1949, le docteur Senior, Chef du Service Dentaire, adressant la parole à Milan, disait: "Les statistiques montrent qu'en Angleterre et dans les Galles, il y a environ 10,000 dentistes au service du public; de ce nombre, un peu plus de 90% ont opté pour le service gouvernemental; ces chiffres ne comprennent pas les dentistes exerçant dans les hôpitaux, ne donnant que des consultations ou dans le service de priorité."

Les chiffres exacts manquent, mais il paraît raisonnable de déduire que le pourcentage des dentistes en rapport avec la population est de 1-4,000 et que le tiers de ces dentistes font partie des 1921. Comparons ces chiffres avec ceux d'autres pays. Aux Etats-Unis, la proportion est de 1-2,000, et tous ces dentistes sont des diplômés d'universités.

En 1940, le Brig.-Gén. Leigh Hunt, Chef du Service Dentaire Militaire de Washington, me disait que pas même

25% de la population recevait des traitements adéquats et de bonne qualité.

Angleterre, 1 dentiste par 4,000 de population

Suède, 1 dentiste par 2,440 de population

Suisse, 1 dentiste par 2,300 de population

Danemark, 1 dentiste par 2,200 de population

Etats-Unis, 1 dentiste par 2,000 de population

Norvège, 1 dentiste par 1,890 de population

Tous ces pays, la Norvège comprise, se plaignent d'une pénurie de dentistes.

Organismes intéressés à un Service Dentaire compréhensif

Le curriculum dentaire est formé par diverses branches de *sciences naturelles*, mais un service dentaire compréhensif est une branche des *sciences sociales*, s'occupant d'individus et groupes d'individus. Les initiateurs des négociations qui ont amené l'introduction des Services de Santé, le 5 juillet 1948, parurent, aux yeux du public et des professions, le Ministre de la Santé et les Exécutifs des trois Sociétés Dentaires.

Malheureusement, les deux groupes manquaient de confiance mutuelle et de cette compréhension si nécessaire à la prévention des mésententes, qui s'imposent toujours au sein de discussions prolongées de ce genre; cet esprit de franche collaboration est indispensable pour qu'une discussion produise les meilleurs fruits.

L'équipe du Ministère de la Santé

Elle est composée du Ministre lui-même, de l'Officier Médical en-chef, de l'Officier Dentaire en-chef et des membres seniors de leurs départements et d'autres personnes, que le Ministère juge bon de s'adjoindre.

L'équipe professionnelle.

Elle se compose en fait des membres de toute organisation et de toute Société Dentaire du pays, puisque toutes sont directement ou indirectement concernées par le plan.

En se rappelant la définition de la Dentisterie, qui est un Art basé sur une Science, faisant partie intégrale des Ser-

vices de Santé, et pour éviter tout malentendu, la profession dentaire peut être divisée en deux groupes: la Dentisterie organisée et les organisations dentaires.

Les organisations dentaires

L'Art de la dentisterie—La Société, qui s'occupe seulement de ce qu'on pourrait appeler la dentisterie de précision, est La Société Dentaire Américaine de Londres. Composée de 50 membres choisis, détenant des diplômes américains (condition presque indispensable d'admission) et de quelques dentistes éminents, possédant des certificats anglais seulement.

La Science de la dentisterie—La Section Odontologique de la Société Royale de Médecine, qui s'occupe seulement du côté scientifique de la dentisterie. Le Service de Santé Dentaire, en tant que service de santé, ne concerne pas ces deux sociétés, mais ce que j'ai appelé "la dentisterie organisée".

Dentisterie organisée

Cette appellation veut dire l'Association Dentaire Britannique et deux autres sociétés dentaires, la P.L.S.A. et la I.D.S., qui se fusionneront bientôt. Ces associations sont en relation avec le Ministère de la Santé et, de justice, jouent un rôle

politique; ce qui veut dire que l'Art et la Science du Gouvernement et les Services de Santé de la nation dépendent des activités et des réalisations de ces trois sociétés. On devrait ajouter que l'Association Dentaire Britannique ne s'occupe pas seulement de la santé, mais s'occupe aussi de science et à un moindre degré, de questions techniques, par le truchement de son Journal, excellent par ailleurs.

Ces observations s'appliquent également à la P.D.S.A. et aussi, mais, dans une moindre proportion, à la I.D.S.

Le mouvement de Groupes

Dès le début, les Groupes ont affiché un immense enthousiasme, justifié par ailleurs, d'avoir créé un terrain d'entente commun pour tous les membres de la profession; leurs efforts ont hâté le jour où toutes les énergies et les idées seront unifiées pour que la profession forme un corps politique compact et présente des opinions unanimes. L'importance et l'influence des Groupes grandit de jour en jour et, selon l'opinion de certains membres de l'A.D.B., il est possible qu'ils soient reconnus généreusement dans les délibérations du Bureau de Représentation.



Chiffres des contribuables canadiens, par professions, 1947

Profession (en ordre selon la moyenne du revenu)	REVENU			IMPOT			
	Nombre	Revenu moyen	Revenu total (en mil- lions)	Pourcen- tage du grand total	Impôt moyen	Impôt total (en mil- lions)	Pourcen- tage du grand total
Avocats	3,886	\$7,822	\$30.4	0.54%	\$2,056	\$ 8.0	1.29%
Médecins et chirurgiens.....	7,442	7,666	57.0	1.02	1,799	13.4	2.15
Ingénieurs et architectes.....	1,114	7,452	8.3	0.15	1,882	2.1	0.34
Dentistes.....	3,557	5,713	20.3	0.36	1,049	3.7	0.59



Photographie prise
durant le cours
donné par le docteur
Harry M. Seldin à
l'Université de
Montréal

Groupe de dentistes
réunis dans l'amphi-
théâtre de la Faculté
de Chirurgie Dentaire
de l'Université de
Montréal pour assister
à une leçon clinique du
docteur Seldin, chirur-
gien buccal de répu-
tation internationale et
docteur P. W. Cle-
ment, de Toledo,
Ohio, président de la
Section d'Anesthésiolo-
gie de l'American
Medical Association.
Debout, on remarque,
de g. à d. les docteurs
Antoine Raymond,
Clement, Ernest Char-
ron, Seldin, Gérard de
Montigny.

MEMO

1950	APRIL	FRI	SAT
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	

1950	MAY	FRI	SAT
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	

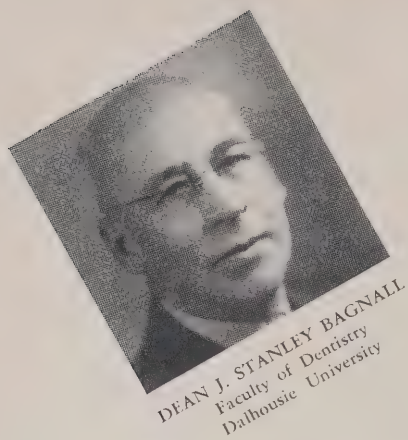
1950	JUNE	FRI	SAT
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	

A Reminder
to attend the Annual Meeting
of the Canadian Dental Association
in cooperation with the Ontario Dental
Association, Royal York Hotel, Toronto.

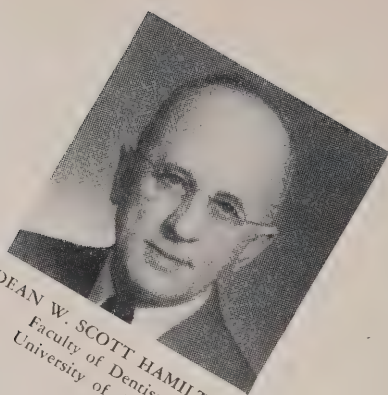
These are **RED-LETTER DAYS**
for Dentistry and shouldn't
be missed

Mark these dates in your appointment book NOW!

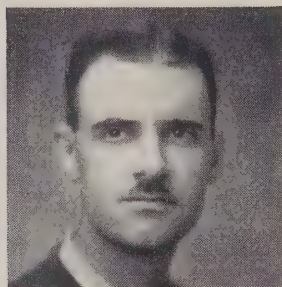
★ C.D.A. AND O.D.A. MEETING ★ MAY 14-17 ★



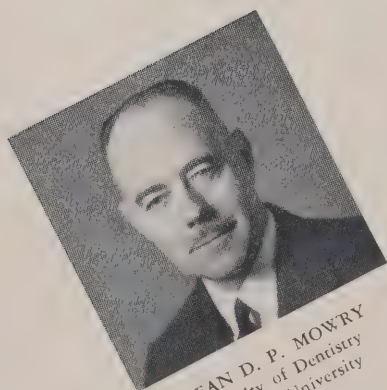
DEAN J. STANLEY BAGNALL
Faculty of Dentistry
Dalhousie University



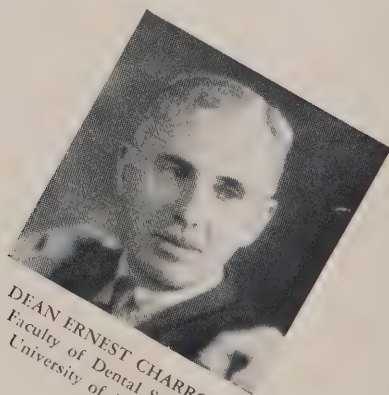
DEAN W. SCOTT HAMILTON
Faculty of Dentistry
University of Alberta



DEAN R. G. ELLIS
Faculty of Dentistry
University of Toronto



DEAN D. P. MOWRY
Faculty of Dentistry
McGill University



DEAN ERNEST CHARRON
Faculty of Dental Surgery
University of Montreal

Dental education was founded 75 years ago in Canada. These Deans are now ably guiding the destiny of our profession. "As the twig is bent, so is the tree inclined."

The Three-Quarter Crown In Fixed Bridgework

by HARRY A. TINKER, D.D.S., Minneapolis, Minnesota

THE three-quarter crown is probably one of the most useful yet most abused preparations in dentistry. A common three-quarter abutment is a slice on the mesial and distal, indented by a slight groove on either surface. Such procedure is inadequate and should not be used in fixed bridgework. This preparation, for successful results, depends upon a rigid staple formed by a strong incisal step plus well-formed mesial and distal grooves connected with a segment of a circle at the gingival margin.

This is an age where aesthetics is all-important as the demand for plastics to conceal gold proves this point. A glaring mistake of the anterior preparation is the large, unnecessary amount of gold shown by the slice preparation. The initial cuts should be especially observed in that they are made from the lingual and merely extend through the contact point to the labial surface.

One should also see that the cingulum is used to advantage, and that there is established a definite incisal step. (Fig. 1.)

Another important feature is that the mesial and distal grooves are nearly parallel and have depth at the gingival ends. With the use of a strong incisal step, it is not necessary to show a bulk of gold at the incisal. Incidentally, at the time of the preparation, the incisal edges should be checked for

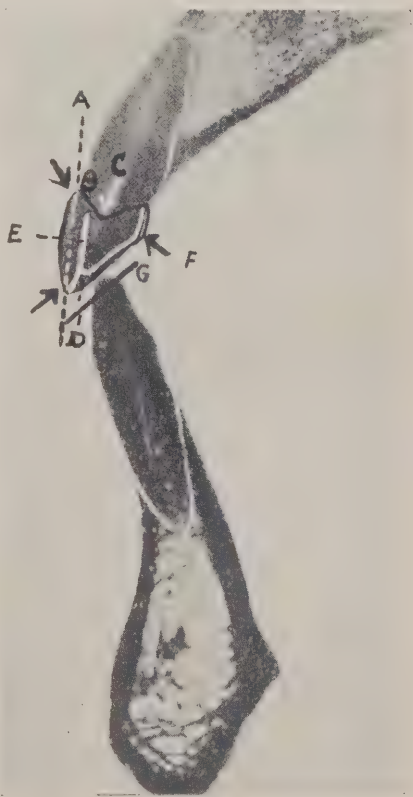


FIG. 1.

weak enamel rods to prevent their breaking off when the casting is put in place.

A common error in bicuspsids and molars is failure to take advantage of

the occlusal fissures to aid in resistance and retention form. These fissures should be cut through the dento-enamel junction with a cylindrical fissure bur. This, in combination with a well-boxed semi-Black inlay preparation on the mesial and distal portion, is the basis for a successful preparation.

Let us now consider the steps in the preparation of the three-quarter crown for an anterior tooth.

1) *Study the type of tooth.* If it is a square type, and has inter-proximal decay or fillings, box preparations, instead of proximal grooves, may be indicated. If the tooth is short, a threaded iridoplatinum pin may be necessary in the cingulum.

In a tapering tooth, extra care must be exercised in the placement of the grooves or undercuts will result on mesio- and disto-labial angles.

Examine the tooth from the lingual surface for any peculiarities.

Make a mental picture of where the cuts will be and their relationship to the other abutments.

Examine the incising action. Determine the amount of shearing by protrusive movements of the mandible. Difficulties are enhanced in direct proportion to the amount of lingual inclination.

Check the resting point of lower incisors against the lingual surfaces of the upper incisors in centric occlusion, especially its relationship to the cingulum.

A slight distal occlusion complicates our preparation as it means a sacrifice of the valuable resistance form gained from the cingulum. At this time examine the lower incisors for abraded and roughened surfaces. These should be beveled with a stone and then polished with a disc. This removes an abrasive force and gives added space for gold. Another added feature of this step is that it lessens the strain on the lower anteriors and encourages a healthy periodontal condition. (Fig. 1.)

The incisal surfaces of the uppers are now checked for weak enamel rods

and abraded surfaces which are disced and polished.

2) *Initial Cuts.* With a $\frac{7}{8}$ inch straight safe-sided disc, either diamond, carborundum, or steel, the initial cut is made from the lingual through the contact point. This is not a slice but follows the contour of the tooth. These cuts should extend under the free margins of the mesio- and disto-lingual areas, except on extremely tapering teeth, gaining as much for resistance form as possible. They should not extend labially any farther than to reach a self-cleansing area. Proximal fillings should be ignored at this time. (Fig. 3.) If any attempt is made to include proximal fillings, an unsightly amount of gold will be shown on the labial and no additional strength is gained. *The gold that shows on the labial surface is never indicative of the strength of the preparation.* The retentive value of a $\frac{3}{4}$ crown lies in the length and depth of the grooves and cingulum.

3) *Lingual Surface.* The lingual is reduced with a small, heatless stone, preserving the cingulum as much as the bite will permit. Study the excursions of the mandible so as to make certain that at least one millimeter of clearance is obtained.

4) *Incisal Step.* The initial cut for the incisal step is made with a cylindrical stone either carborundum or diamond, it should follow the incisal outline and is about 2 to 3 millimeters in width. This stone is moved from mesial to distal following the incisal contours, cutting slowly through the enamel to the dentine. An inverted cone bur is then used to make the angle more acute and give added resistance form. The depth of this step is guided by the thickness of the incisal third. This should always terminate in the dentine, but never through it, so as to avoid a shadow on the labial and should just be free of incisive action, if possible. This step (Fig. 1) gives us bulk of gold and strength between the lateral grooves of our preparation. It also prevents

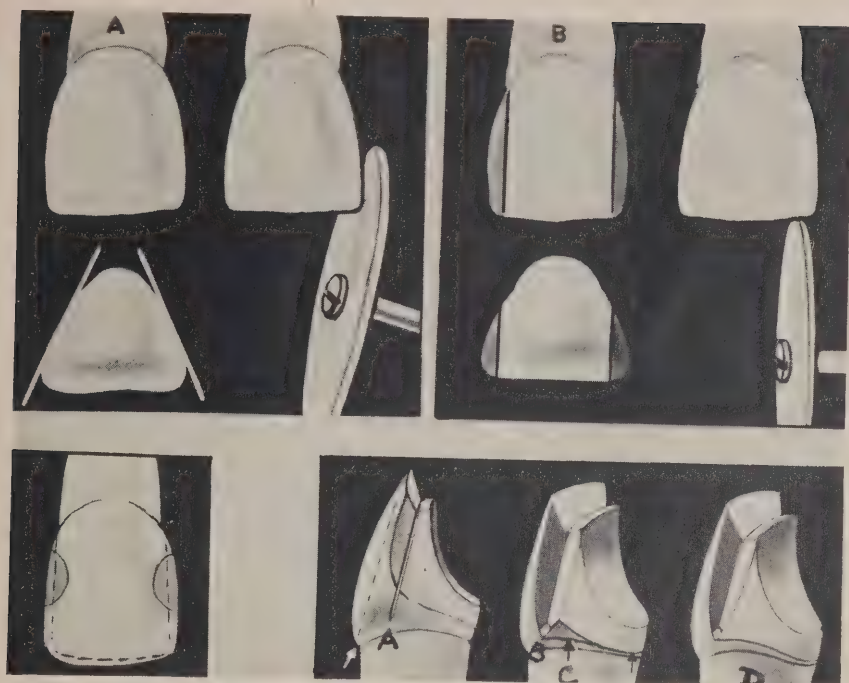


Fig. 2. (above) (A) Correct angle of disc in making approximal slice. (B) Incorrect angle.

Fig. 3. (left, below) Three-quarter crown leaving proximal fillings in place, as in a normal tooth. These are replaced after restoration is set.

Fig. 4. (right, below). (A) Groove cut parallel to imaginary line from incisal step, the full depth of the bur. (B) Groove extended to labial by chisels, Krause file, No. 5, diamond point, and finished with fine garnet disc. (C) Note proximal under-cut or contour which is removed with small tapering finishing bur or diamond stone of similar size. (D) Finished preparation of three-quarter crown. Note parallel cut of cingulum to groove.

springing of the restoration and consequent breakdown of cement causing labial discolouration and eventual decay in this area.

5) The placing of the *interproximal grooves* on anterior teeth is a technical procedure that requires skill and a trained coordination of the hand and eye.

In bridge construction there are *two important variable factors* to consider: First, the labial inclination of the anterior teeth. Is it a central, lateral, or cuspid? Second, the shape of the tooth—square or tapering.

Let us consider the *first variable*, the labial inclination. The long axis of the central and lateral is generally to the labial. The lateral slightly more to the

lingual from the central. The cuspid is nearly vertical and is practically parallel to the long axis of the bicuspid when in normal occlusion. The groove in turn must be placed approximately parallel to the long axis.

Second variable, if the tooth is square, the groove may be placed more to the labial, thus gaining added length. If it is tapering, it should be more to the lingual to prevent an undercut. To eliminate this error, needless removal of the labial surface is essential, thus displaying an unnecessary amount of gold.

We must also remember to obtain as long a groove as possible. The length of the groove determines the resistance and retention of the staple wherein lies

the strength of the three-quarter crown.

With these factors in mind, let us now place the groove on a central incisor. Using the acute angle of the incisal step as an initial guide to start, take a 700, 701 tapered cross-cut fissure bur in the straight hand-piece. Visualize an imaginary line from the labial incisal edge to the labial cemento-enamel junction. Now select an area midway between the height of the interproximal curvature of the cervical line and the labial cemento-enamel junction as the termination point of the groove. The groove is now cut parallel to the labio-incisal imaginary line through the enamel. This gives us length, places the groove farther away from the pulp, permitting a deeper groove and gives more resistance value with added strength. The other groove parallels this one. (Fig. 4.)

The cuspid grooves are usually placed parallel to the long axis of the tooth because of its position in the arch. This is especially true if a tooth posterior to it is to be used as a bridge abutment.

At this time, it should be emphasized that the grooves to the gingival ends should be fully the depth of the bur and bevelled out at the end to a 45-degree angle. With either a flame bur, a Krause file, or a Wedelstadt chisel, the grooves are extended to the labial and these margins then finished with fine garnet discs. These types of instruments are preferred as every effort must be made to avoid undercuts in the grooves. The most likely area of margin failure lies in the gingivo-labial region. (Fig. 4.)

6) *Finishing Line.* Preferably a small, blunt-ended diamond stone is used to establish the definite finishing line below the free gum margin around the cingulum. This stone is held as parallel to the grooves as possible, using a swinging action to avoid grooving, which happens so easily with a diamond stone. A pointed diamond stone is contraindicated for this work as it does not cut efficiently to its point

and will only groove the finishing line.

7) *The mesial and distal prominences* formed by the groove and the initial cut of the disc are reduced with a tapered finishing bur or a small diamond stone. Care should be taken that these surfaces taper sufficiently to avoid undercuts and give a finishing line which is below the free gum margin.

The three-quarter crown preparation on bicusps and molars which I generally use is basically a Dr. Black's M.O.D. inlay preparation restoring the cusps and removing the lingual contour to a finishing line beneath the free gum margin. The inlay preparation gives us the staple, and the inclusion of the lingual surface offers the segment of the circle which makes a true three-quarter crown. When we have a typical inlay preparation with the occlusal fissure cut through the dento-enamel junction with a cylindrical fissure bur, the result is a preparation that has the resistance and retention form of the inlay plus the added retention of the lingual, giving us a strong, serviceable unit. The mesial and distal boxing should be carried gingivally, terminating in a long bevel under the free gum margin to obtain greater length and increased resistance form. The bulge of the lingual contour should be generously reduced with a small, heatless stone as far as access permits. The mesial and distal lingual surfaces are then removed with small, cup-shaped discs with the finishing line established below the free gum margin with a small, blunt, tapered diamond point. To conclude the preparation, all of the exposed peripheral areas are finished with fine garnet discs to remove weak enamel rods and eliminate rough surfaces.

SUMMARY

1) It is always well to remember that the strength of the three-quarter crown depends upon the staple formed by the grooves and the incisal step

plus the semi-circle formed around the cingulum.

2) The cingulum should not be reduced any more than is absolutely necessary.

3) The grooves should have depth to the gingival ends.

4) The gold that shows on the labial surface is never indicative of the strength of the preparation.

ANNOUNCEMENTS

Reserve the Dates NOW for the

NATIONAL CONVENTION OF THE C.D.A. AND O.D.A.

ROYAL YORK HOTEL

• TORONTO

MAY 14, 15, 16, 17, 1950

HOTEL ACCOMMODATION

MAKE ANY RESERVATIONS DIRECT WITH THE HOTEL

The Association will not be responsible for any Hotel Reservations.

GRAND TOUR TO NIAGARA FALLS

Entertainment Feature—THURSDAY, MAY 18, 1950

Gray Line coaches leave Royal York Hotel at 9.00 a.m. returning 7.00 p.m. Ample time to visit historic and scenic spots of Niagara district.

Cost—\$7.00 per person including Luncheon in the beautiful Rainbow Room, General Brock Hotel.

APPLICATION SHOULD BE MADE BEFORE MAY 1, 1950

CHEQUES PAYABLE AT PAR TORONTO ACCOMPANY APPLICATIONS

Miss Dorothy Jutton, Treasurer,
Ontario Dental Association,
86 Bloor St. W., Toronto, Ont.

American Dental Society of Europe. Amsterdam, July 19-22.

F. Douglas Derrick, 140 Park Lane, London, W.1.

A.D.A. Convention

The 91st annual session of the American Dental Association will be held in Atlantic City, Oct. 30 - Nov. 2.

The First Annual Berkshire Conference in Periodontology and Oral Pathology

Tufts College Dental School Postgraduate Division will conduct an advanced conference in Periodontology and Oral Pathology under the direction of Dr. Irving Glickman and staff, at Eastover, a resort hotel in Lenox, Massachusetts, June 13 to 17, 1950. The conference will consist of four days of lectures, seminars, and panel discussions regarding clinical problems by outstanding teachers and clinicians in dentistry, medicine, and their related fields.

The curriculum is arranged so that the mornings and evenings are devoted to professional activities, with afternoons open for recreation.

A METHOD OF MEASUREMENT OF ROOT AREA*

by ROBERT BROWN, D.D.S., Toronto, Ontario

EVERY dentist is familiar with the wide range of size and shape of roots of teeth and it is assumed that this variation has an effect on their ability to tolerate functional loading. In spite of the significance of their size and shape, little has been written to describe measurements of the area of root surface which act as attachment surface for the supporting structures of the teeth.

With this in mind, a preliminary study was set up, to test the method of measurement. Upper central incisors only were employed. Observations suggest interesting and valuable data is to be obtained from such a study.

The method of measurement of the surface area of irregular root surfaces presented a problem. Various substances were used to coat the root.

The material best suited for the purpose was found to be a milky liquid latex. It was painted on the root with a paint brush and allowed to set. On setting, the latex becomes translucent.

TABLE 1

Length of root from the midline of the labial surface of the amelo-cemental junction to the apex:

Tooth No.	
1.	13 mm.
2.	15 "
3.	12 "
4.	14 "
5.	14 "
6.	13 "
7.	12 "
8.	11 "
9.	12 "

A razor was then used to slit the root covering down the side and the layer of latex peeled off and laid out flat on the grid paper. The squares covered were counted and the area noted in square millimeters. (Note figure 1.)

The measurements were as follows:

1. The length of the root from the cemento-enamel junction to the apex. (See table 1).
2. The surface area of the whole root;



FIG. 1.

*From the Department of Periodontology, Faculty of Dentistry, University of Toronto.

TABLE 2

Area of root from apex to amelo-cemental junction:

Tooth No.
1. 216 sq. mm.
2. 200 " "
3. 176 " "
4. 192 " "
5. 228 " "
6. 188 " "
7. 176 " "
8. 160 " "
9. 192 " "

TABLE 3

Area of root from apex to within 2 mm. of amelo-cemental junction:

Tooth No.	% reduction of area
1. 136 sq. mm.	1. 27%
2. 132 " "	2. 35%
3. 144 " "	3. 18%
4. 136 " "	4. 30%
5. 168 " "	5. 26%
6. 160 " "	6. 15%
7. 112 " "	7. 36%
8. 120 " "	8. 22%
9. 156 " "	9. 19%

- from the cemento-enamel junction to the apex. (See table 2).
3. The surface area from a line representing a two millimeter apical recession of principal fibre attachment to the apex. (See table 3).
 4. The surface area from a line representing a four millimeter recession to the apex. (See table 4).
 5. The surface area from a line repre-

sented a five millimeter recession to the apex. (See table 5).

Refer to figure 2.

Observations:

There is a variation in root length from 11 mm. to 15 mm., a difference of 38%. (See table 1).

We have represented a gradual loss of bone and principal fibre attachment from the alveolar edge to the apex of

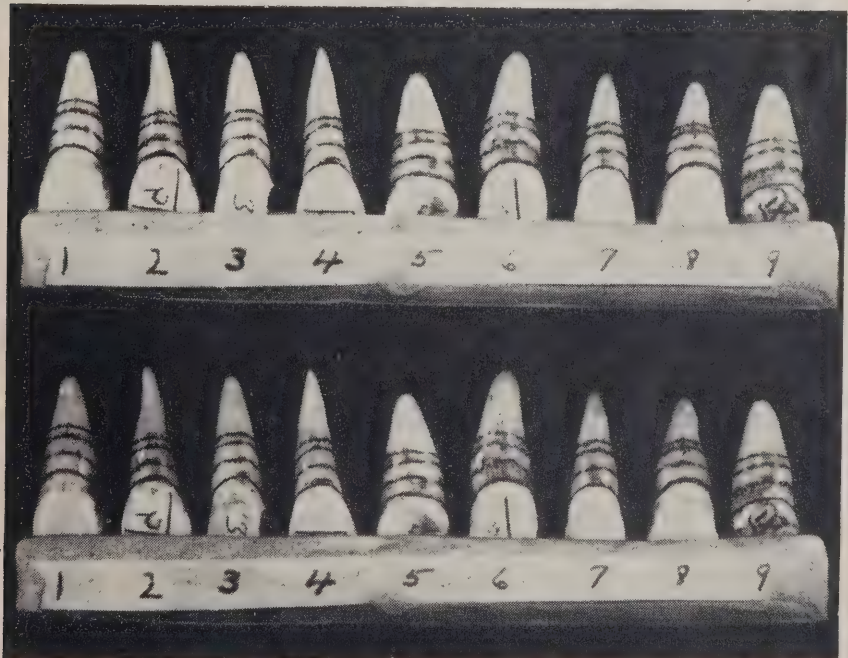


FIG. 2.

TABLE 4

Area of root from apex to within 4 mm. of amelo-cemental junction:

Tooth No.	% reduction of area
1. 84 sq. mm.	1.61%
2. 80 " "	2.60%
3. 100 " "	3.43%
4. 80 " "	4.58%
5. 108 " "	5.53%
6. 112 " "	6.40%
7. 80 " "	7.55%
8. 72 " "	8.55%
9. 100 " "	9.48%

TABLE 5

Area of root from apex to within 5 mm. of amelo-cemental junction:

Tooth No.	% reduction of area
1. 68 sq. mm.	1.68%
2. 72 " "	2.64%
3. 72 " "	3.59%
4. 72 " "	4.62%
5. 92 " "	5.60%
6. 92 " "	6.51%
7. 64 " "	7.64%
8. 52 " "	8.68%
9. 84 " "	9.65%

the tooth. Table 2 shows the total area of the roots ranged from 160 to 228 sq. mm. Conditions simulating two, four and five millimeter apical migration of bone edge for the complete circumference of the tooth are shown. The tables indicate that there is a wide variation in percentage reduction of the area to which pericemental fibres will remain attached after recessions of two, four and five millimeters. In the case of tooth No. 6, 85% of the attachment surface is intact after two millimeters recession, while only 64% of the attachment surface remains in tooth No. 7 with equal recession. (See table 3).

When conditions comparable to a four millimeter recession were simulated, the percentage of root area to which principal fibres remained attached, ranged between 60% and 39%. When conditions simulating five milli-

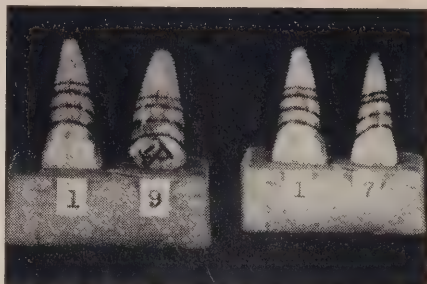


FIG. 3.

meter apical migration of alveolar edge were demonstrated the percentage of original attachment area remaining, ranged between 49% and 32%. This is illustrated in figure 3 in which tooth No. 1 has a more or less average-shaped root.

These root tapers apically from the two millimeter mark. Tooth No. 7 tapers from the amelo-cemental junction while tooth No. 9 tapers from the four millimeter mark. It will be noted that the percentage reduction is most rapid in those teeth which have an even sharp taper from the amelo-cemental junction, and is less rapid where the sides of the roots of teeth are relatively parallel in the coronal portion of the root.

SUMMARY

1. A system of measurement has been applied.
2. A wide variation in total area for attachment of principal fibres has been observed for roots of different form.
3. The significance of reducing the area of attachment of principal fibres such as might be the result of periodontal disease, has been tested.
4. There appears to be a noteworthy relation between the sharpness of taper of roots and the percentage by which the attachment area will be reduced by any given recession.
5. There appears a clinical significance in the relationship between apical migration of the alveolar edge and the percentage reduction of the principal fibres of the attachment area.

CANADIAN DENTAL ASSOCIATION

Regulations Governing The Award of Studentships

1. The Canadian Dental Association through its Research Committee offers "Studentships" to suitable students or graduates who have given distinct evidence of capacity for original research, (or, who have won high distinction in scientific study during their University training), and who desire to prepare themselves further for scientific research by continuing their study in the sciences fundamental to their research fields.

2. They are available on equal terms to men and women, and are awarded to the applicants who are deemed best qualified by the evidence submitted.

3. The age of the applicant and marital status will be important considerations when making an award. Previous training will also be taken into account.

4. Application for a Studentship must be made by the candidate to the Research Committee of the Canadian Dental Association and addressed to this Committee, care of the Secretary, Canadian Dental Association.

5. Application forms are available at the Canadian Dental Association Office on request.

6. An applicant shall submit a transcript of his university record together with a statement from his sponsor who may be the Dean of a Dental School or head of a scientific department within a university, showing that in his estimation, the applicant is worthy of training for scientific dental research.

7. The candidate shall state the institution at which he intends to study and the general line of work to be followed.

8. Applications will be considered at the regular stated meetings of the Research Committee of the Canadian Dental Association in September, January and May.

9. The applicant must state how much financial assistance is required to complete the proposed course of study. Payments will be made on a monthly basis during the period of which a Studentship is held.

10. All apparatus and materials purchased with grants are the property of the Canadian Dental Association, unless otherwise provided for in specific cases.

11. Part-time teaching in a university department or faculty may be considered favourably during the terms of tenure of the Studentship.

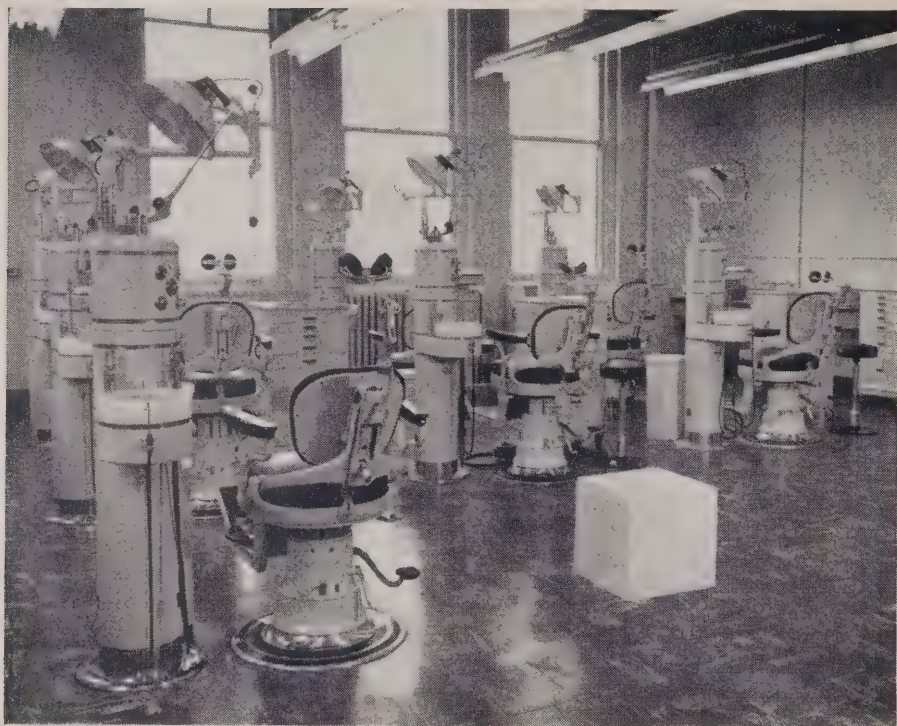
12. Interim reports on the student's progress may be requested from the Dean or head of the department in which the student is working. The Canadian Dental Association reserves the right to discontinue the Studentship after reasonable warning is given the student, if progress reports are unsatisfactory. The final report prepared by the student and supported by the Dean or head of the scientific department, indicating in some detail the results accomplished in the study, must be submitted to complete the tenure of the Studentship.

Address all communications to:

THE SECRETARY, *Canadian Dental Association*,
211 Huron St., Toronto, Ont.

In business, the increases in salary and other rewards go to the person who can do the most with the least. In government service the rewards go to those who can do the least with the most.—De Witt Emery

Any profession which makes big demands upon a man's time tends to narrow his outlook. Any professional man who wishes to become great rather than brilliant at his work will resist this tendency. This applies to the qualified professional man and to the student equally.



GRADUATE CLINIC, UNIVERSITY OF TORONTO

75TH ANNIVERSARY

It is eminently fitting that on the occasion of the Seventy-Fifth Anniversary of organized dental education in Canada, there should convene in Toronto a joint assemblage of members of the Ontario Dental Association and the Canadian Dental Association, for it was in this City in the month of November of 1875 that the School of Dentistry of the Royal College of Dental Surgeons of Ontario—the first Canadian dental school—opened its initial Session. Previous to this event there had come into being in 1868, an Act Respecting Dentistry which required those desirous of commencing the study of dentistry to take a matriculation examination prescribed by members of the Board of the Royal College of Dental Surgeons of Ontario and to complete an indentureship.

Through the years which have elapsed since 1875 dental education has progressed to its present eminent position as a University discipline in five Canadian Universities.

The Staff of the Faculty of Dentistry, University of Toronto, extend a cordial invitation to all delegates attending the convention, to visit the dental building on the afternoon of Wednesday, May 17, when a comprehensive scientific program will be presented.

Annual Meeting Of
THE CANADIAN DENTAL ASSOCIATION
In Co-operation With
THE ONTARIO DENTAL ASSOCIATION—MAY 14-17, 1950
Theme: PREVENTION AND CONSERVATION

TENTATIVE PROGRAM

SPEAKERS

MONDAY LUNCHEON—MR. JOHN FISHER **WEDNESDAY LUNCHEON**—DR. HARVEY REID
Subject: Seventy-five years of Dental Education in Canada. *Subject: Health Insurance as it Relates to the Dental Profession of Canada.*

ESSAYISTS

MONDAY AFTERNOON
 DR. L. S. FOSDICK Caries Control.

TUESDAY AFTERNOON
 DR. HERMAN BECKS Development and Maintenance of the Health of the Oral Structures.
 DR. JOHN THOMPSON Physiologic Basis of Occlusal Function.

CLINICIANS

DR. E. ROMLY ROMINE — DETROIT, MICH. Conservation of the Oral Structures through Operative Procedures. DR. VICTOR L. STOFFEL — COLUMBUS, OHIO Removable Partial Dentures and Related Factors. DR. FELIX FRENCH — OTTAWA, ONT. Occlusal Patterns. DR. A. DOUGLAS RICHARDSON — MONTREAL, QUE. Endodontia for the General Practitioner. DR. H. M. WORTH — TORONTO, ONT. Aspects of Dental Radiology. DR. S. ARTHUR RENAUD — MONTREAL, QUEBEC. Amalgam its Evolution and Most Recommended Technique.	DR. GERALD RACEY — MONTREAL, QUEBEC. Diagnosis for the General Practitioner. LT. COL. KENNETH M. BAIRD, O.B.E., D.D.S. LT. COL. GORDON G. SHILLINGTON, D.D.S., B.Sc. (DENT.). MAJOR BERTRAM P. KEARNEY, M.B.E., D.D.S. Presentation Covers Examination and Treatment Planning Recommended by R.C.D.C. School for Use of Clinic Officers. DR. W. SCOTT HAMILTON — EDMONTON, ALTA. Oral Surgery. DR. ROBERT E. MOYERS — TORONTO, ONT. Diagnostic and Prognostic Procedure in Orthodontics for the General Practitioner. DR. ED. BILKEY — TORONTO, ONT. Space Maintenance.
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2 — LUNCHEONS — 2

Monday, May 15th — Wednesday, May 17th, 12:30 noon

"GOOD FOOD AT ITS BEST"

Have you ever tried a meal free from refined sugars and low in carbohydrates? If not—then you have no idea how delicious such a meal can be! Join your friends and confrères at the noon-day luncheons, Monday and Wednesday. Help put practical prevention to work.

LADIES' ENTERTAINMENT

CONVENTION MAY 15-17, 1950

It is the hope of the Ladies' Committee that as many wives as possible will accompany their husbands to the Convention to participate in the fine program being planned.

SUNDAY—Evening Musicales

MONDAY—A choice of: Tour to James Gardens OR Conducted Tour of Royal York Hotel.

—Dinner—Roof Garden, Royal York Hotel. Speaker: Byrne Hope Sanders, C.B.E., Editor, "Chatelaine" Magazine.

TUESDAY—Luncheon—Guild Inn. (Transportation from hotel).
 Convention Dinner & Dance—Stan Patton's Orchestra—Excellent Floor Show.

WEDNESDAY—No scheduled program.

THURSDAY—Trip to Niagara Falls.

Dental Corps Officers Reunion Dinner

All ex-officers of the Canadian Dental Corps are invited to attend a dinner meeting sponsored by the Defence Dental Association of Canada on Tuesday, May 16 at 12:30 noon.

Tickets and location formation available at the Convention. Active force officers are particularly welcome to attend this function.

R. C. McLaughlin, Secretary-Treasurer, Ontario Branch



CLINICIAN:

DR. VICTOR L. STEFFEL,
Columbus, Ohio
Professor of Prosthetics,
College of Dentistry
Ohio State University

SUBJECT:

"Removable Partial Dentures
and Related Factors."



CLINICIAN:

DR. E. ROMLY ROMINE,
Detroit, Michigan
Lecturer in Periodontia,
W. K. Kellogg Foundation Institute
Graduate and Post Graduate Dentistry,
University of Michigan

SUBJECT:

"Conservation of Oral Structures Through Operative Procedures."

CLINICIAN:

DR. GERALD RACEY,
University of Montreal
Professor of Oral Pathology,
University of Montreal

Associate Professor of Oral Pathology
Associate Professor Oral Diagnosis and
Oral Surgery

Faculty of Dentistry, McGill University, Montreal

SUBJECT:

"Diagnosis for the General
Practitioner."



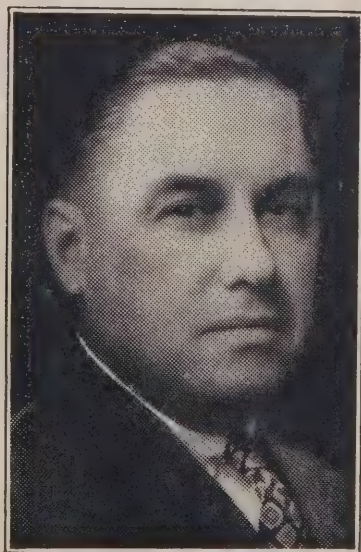
CLINICIAN:

DR. A. DOUGLAS RICHARDSON
Montreal, Que.

Lecturer
Dept. of Endodontia Faculty of Dentistry
McGill University, Montreal

SUBJECT:

"Endodontia for the General
Practitioner."



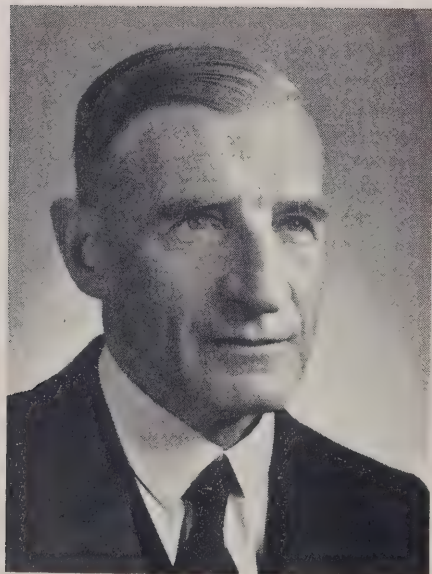


CLINICIAN:

DR. J. ARTHUR RENAULD,
Montreal, Que.
Professor of Pre-Clinical Operative Dentistry,
University of Montreal

SUBJECT:

"Amalgam Its Evolution and
Most Recommended Technique."



CLINICIAN:

DR. FELIX A. FRENCH,
Ottawa, Ont.
National Society of Denture Prosthetists,
Life Member American Academy Denture
Prosthetics

SUBJECT:

"Occlusal Patterns."

CLINICIAN:

DR. H. M. WORTH,
Toronto, Ont.

Radiologist, Guys Hospital, London, Eng.
Lecturer, Radiology, Guys Hospital Medical
School and Guys Hospital Dental School
Radiologist, Wellesley Hospital, Toronto
Consultant, Hospital for Sick Children, Toronto
Lecturer Radiology Faculty of Dentistry, Toronto

SUBJECT:

"Some Aspects of Dental
Radiology."



ANNOUNCEMENTS

SUNDAY EVENING MUSICALE — SUNDAY, MAY 14
ROYAL YORK HOTEL • CONCERT HALL

A varied program will be presented by the Opera School of the Royal Conservatory of Music under the direction of Nicholas Goldschmidt.

Plan now to enjoy this hour of good fellowship and excellent music.

Dr. W. G. McINTOSH, Chairman

ARTISTS AND PHOTOGRAPHERS NOTE—

Do not forget the non-competitive exhibition of paintings, drawings, photographs and colour slides at the coming C.D.A.—O.D.A. convention. For information and entry form please send at once to:—

Dr. E. B. Sisley, Ontario Hospital, New Toronto, Ontario.

All dentists are privileged by law to practice the entire field of dentistry, yet some specialty boards and two states require the dentist to restrict his practice to a limited area of dentistry, hereby depriving him of his legal rights. A dentist, by virtue of his diploma and state licence, is entitled to all the rights and privileges implicit in both, and should not be deprived of his rights, with or without his consent, by any minority group within the profession. It would be well for all boards to review their requirements in the light of their subordinate relation to the profession as a whole.

If dental practitioners are to be restricted either by law, or by certification by a specialty board, to the practice of a specialty, the public in turn may be deprived of the services of such restricted practitioners in times of depression or when new cures or preventive measures reduce the need for that specialty.—W. H. Wright, Dean, College of D., N.Y. Univ., in N.Y. Jour. of D., Sept. 1949.



Courtesy - Bureau of Information, Province of Nova Scotia

Many friendships will be renewed when delegates are welcomed from Nova Scotia at the combined meeting of the Canadian Dental Association and the Ontario Dental Association.



Courtesy - Travel Bureau, Province of British Columbia

Many delegates are expected and will be welcomed from the most westerly province at the combined meeting of the Canadian Dental Association and the Ontario Dental Association.

ANNOUNCEMENT

University of Toronto, Faculty of Dentistry

CONTINUATION COURSES FOR GRADUATES IN DENTISTRY

Dental Oral Surgery

April 17-21, 1950

A postgraduate course in Dental Oral Surgery will be held at the Faculty of Dentistry, University of Toronto, during the week of April 17-21, 1950. This course will be under the general direction of Dr. J. H. Johnson, Head, Department of Dental Surgery and Anaesthesia.

The course will include a brief review of the fundamentals of surgery, including anatomy, pathology, physiology, radiography, differential diagnosis, pre-operative and post operative considerations, including a discussion of the systemic factors which might limit or contraindicate the extraction of teeth, together with the latest developments in chemotherapy. Instruction will be given in local and general anaesthesia, the pathological relationship of the teeth to the maxillary sinus, fractures of the jaws, cysts, root resections, abnormal frenula, malposed and impacted teeth, cellulitis and deep neck infections, flap operations and the removal of difficult teeth and roots. An effort will be made to deal specifically with the problems which confront the general practitioner in his office.

Dr. Reed Dingman, Associate Professor of Dental Oral Surgery, University of Michigan, and Dr. F. W. Clement, Toledo, a graduate of the Faculty of Medicine, University of Toronto, and a former member of the staff of this Dental School, will be the guest clinicians.

Tuition Fee \$75.00

Enrolment Limit 12

Nutrition as Applied to the Practice of Dentistry

May 18, 19, 20, 1950

Immediately following the combined meeting of the Canadian Dental Association and Ontario Dental Association, May 15, 16, 17, Dr. Herman Becks, Professor and Head of Division of Dental Medicine, University of California College of Dentistry, San Francisco, and Research Associate, Institute of Experimental Biology, University of California, will conduct a course on the applications of nutrition to dental practice.

It is now widely recognized that the nutritional status of the patient is of importance in the practice of all phases of dentistry. Dr. Becks will describe normal nutrition, evidences of abnormal nutritional states and treatment measures.

The tuition fee for the course is \$15.00.

Pedodontics

April 24-28, 1950

A postgraduate course in Pedodontics will be given by the Faculty of Dentistry, University of Toronto, during the week of April 24-28, 1950. This course will be under the general direction of Doctors S. A. MacGregor and M. A. Cox, the guest lecturers and clinician.

Preventive measures and operative dentistry for children will be combined in this course. Stress will be placed on consideration of the health of the child. Dental caries control measures, normal nutrition, acute and chronic illnesses as they relate to dentistry for children, endocrine disturbances, growth and development, child management, examination of the mouth, treatment planning, cavity preparation and filling materials, extraction of deciduous teeth, space maintainers, and management of injuries to the teeth of children, will be included.

Philip Jay, D.D.S., M.S., D.Sc., Professor of Dentistry, University of Michigan, will be the guest lecturer and clinician.

Tuition Fee \$75.00

Enrolment limit 14

Those interested are asked to inquire respecting enrolment.

Please address inquiries respecting enrolment to:

The Dean,
Faculty of Dentistry,
University of Toronto,
230 College St., Toronto, Ontario.

The allergic reaction is a defensive process, a warning on the part of nature that the cells of the body have encountered a noxious substance. One may attempt to block the immune reaction by using anti-histaminics or to hyposensitize the individual with the use of repeated injections of small quantities of the noxious antigen, but so far the best treatment is prophylaxis; in other words, complete avoidance of the offending substances, whether they are pollens, feathers, cosmetics, animal dander, specific foods, drugs of whatever the antigen may be. The best treatment for pollinosis is to go where there is no pollen to which the patient is sensitive. The best treatment for sensitivity to cats and dogs is to avoid cats and dogs, not to take injections of danders, and the best treatment for sensitivity to chocolate is to avoid chocolate. Likewise a patient sensitive to aspirin should avoid aspirin. The best treatment, avoidance of the specific offender, is, of course, not always possible, in which case other less effective types of treatment must be used. Hyposensitization works best with pollens and other specific inhalent antigens, but at best, leaves much to be desired.—Louis E. Prickman, M.D., M.S., in Proceedings of the Staff Meetings of the Mayo Clinic, Aug. 17, 1949.

The Forum

THE PROBLEM OF OCCLUSION IN THE GENERAL PRACTICE OF DENTISTRY

by EARL ALLEN NELSON, D.D.S., Minneapolis, Minn.

Conclusion of paper in N. West Dent., April 1949.

In conclusion, I would like to call attention to the relationship between the occlusion, the curve of Spee, and the compensating curve. Unnecessary confusion exists in the minds of dentists concerning these very important factors.

The curve of Spee is an imaginary line which coincides with Nature's ideal arrangement. However, Nature did not intend that the teeth should slide along this line in the various excursions of the mandible. Cusps and the overbite are also a part of Nature's arrangement. The presence of cusps and overbite makes it necessary for the entire mandible to drop downward in the protrusive movement rather than slide along the curve of Spee. The compensating curve is the arrangement of the teeth which enables one to establish three point contact. This curve may differ from the curve of Spee because of variations in the condylar paths. The direction of the mandibular movements also leaves this curve when cusps and an overbite are added. The cusps and overbite will not disturb the balance providing the in-

creased angle of the planes of the cusps, and overbite will compensate for the change in the direction of the mandible. Adherence to these facts is necessary in constructing occlusion which is physiologically correct for the patient.

It is significant that the use of cusps tends to flatten the compensating curve, but the absence of cusps makes it necessary to adhere to the compensating curve. This has caused many operators to adopt flat cusp teeth and arbitrary curves. Arbitrary curves are inadequate because they may not compensate. Only the proper angle of the incisal guide plate, or some other similar arrangement, will help produce proper but not interlocked cusps. In turn, the occlusal guide splints are a guide in making correct cusps. Balanced occlusion may be produced by generating occlusal paths in wax in the mouth, as stated by Meyer. This cannot be done when all the teeth are separated or without an appliance to guide the direction of the mandible, or without correct opposing cusps while generating the paths.

SPECIALIZATION IN DENTISTRY

by WALTER HENRY WRIGHT, D.D.S., Dean, College of Dentistry,
New York University, New York, N.Y.

Summary of paper in N.Y. Jour. of D., Sept., 1949.

1. Dentistry is the equivalent of an oral specialty in the practice of medicine and dentists are specialists equivalent to specialists in medicine.

2. Dentistry now has five specialty boards, and approximately five spe-

cialists per hundred, most of whom are not certified.

3. Medicine has fifteen specialties (exclusive of dentistry) and fifteen specialists to one hundred physicians.

4. General physicians are now de-

veloping an organization in an effort to maintain their rights against medical specialists.

5. Dentistry, contrary to medicine, has amended dental laws in six states in order to legalize specialists, thus bringing the specialist under the control of the state. This legal recognition of specialists in dentistry raises doubts as to the adequacy of dental treatment as now practised by dentists. This abridgement of dental laws may expose dentistry to further changes by additional special groups in the future.

6. Some dental specialty boards and two state laws require a member to restrict his practice to his specialty, although his dental license empowers him to perform all dental treatment as prescribed by law. This restriction under certain circumstances may be a handicap to the specialists and a detriment to the patient.

7. Neither dental education, nor specialty groups should withhold from dentists such information and practices as would contribute to the public welfare. The profession and the public will benefit by emphasizing orthodontics in undergraduate dental education. Dental education in the future should not slight the undergraduate student in order to promote specialties in dentistry.

8. It is natural and desirable that some dentists who are qualified by aptitude and inclination should limit their practices to a restricted area of

dentistry. In doing so they should not be compelled to confine their practice entirely to that field. Likewise, they should not seek protection by amendment of existing dental laws which already cover fully the practice of dentistry.

9. The majority of dentists are qualified by aptitude and inclination to practice the entire field of dentistry. These dentists are the heart of the profession and nothing should be done to depreciate their ability, standing or influence either among the profession or the public.

10. The public will perhaps have some influence over the growth of specialties in dentistry. Dental patients do not enjoy the idea of being sent from one specialist to another for dental services which can be rendered by a single dentist. The additional cost, the division of responsibility, the time consumed, and the loss of personal dentist-patient relationship provided by the family dentist may tend to delimit the use of specialists in dentistry.

11. In the future as in the past, some dentists will limit their practices, and they should be encouraged in this, provided they do not interfere with the rights of general dentists or detract from the unity of the profession. Such groups should base their standards and requirements on the highest disciplines in dental education and their membership on outstanding ability, character and distinguished service to the public.

CONTROL OF DENTAL CARIES BY TOPICAL APPLICATIONS OF SODIUM FLUORIDE: EXPERIMENTAL STUDY ON 97 CHILDREN IN WELLINGTON

by R. E. T. HEWAT, D.D.S. (N.Z.), and F. BRUCE RICE, B.D.S. (N.Z.)

Condensed from New Zealand Dental Journal

The 97 children participating in the study were regular attending patients at the Wellington Dental Clinic. On the 6th of October, 1947, the children were dentally examined and 2 posterior (together with occasional anterior) bite-wing x-rays were taken. The children were re-examined and x-rayed on

the 16th of November, 1948, by the same examiner who was unaware which quadrants had been treated.

During the eight weeks subsequent to the initial examination, each child received a preliminary dental prophylaxis (after recommended abstinence from starchy and sugary foods

for 24 hours) and, on the average, twelve applications of a neutral 2% solution of sodium fluoride. Most of the children received the applications twice weekly.

The procedure of application consisted in isolating the teeth with cotton rolls, drying the teeth, wetting all surfaces thoroughly with the solution by means of dressing pliers and cotton wool, and allowing the solution to remain for approximately four min-

utes. In alternate children, the left and the right quadrants of the mouth were treated.

In treated teeth, there was found:—

- (a) 18.8% less newly carious teeth.
- (b) 23.3% less newly carious surfaces in teeth previously non-carious.
- (c) 41.3% less newly carious surfaces in previously carious teeth.
- (d) 36.4% less newly carious surfaces in all teeth present.



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ANAESTHESIA AND SURGERY IN PATIENTS OF ADVANCED AGE

by PAUL H. LORHAN, M.D., Kansas City, Kansas

Department of Anaesthesiology, Hixon Laboratory for Medical Research
University of Kansas Hospitals*Condensed from paper in Current Research in Anaesthesia and Analgesia—July-August, 1949*

As a result of the increase in the mean span of life during the past forty years, surgery today is complicated by an additional factor, namely, that of senility with all its debilitating diseases.

At the present time the average life expectancy of a man is approximately 59.3 years and of a woman 62.8 years. This increase in the mean span of life has been brought about by a sharp decrease in infant mortality, increased public health measures and better standards of living, as well as by marked advances in the general field of medicine, surgery and anaesthesiology.

With this increase in longevity diseases peculiar to the aged are more prominent. Therefore, anaesthesiologist and surgeon must remember that the aged have specific problems as well as infants and adults. The number of aged persons coming to operation is increasing yearly and anaesthesiologist and surgeon must see that these patients are given proper care, before, during and after operation if morbidity and mortality is to be reduced.

It may be briefly stated that the mortality incidence is greatly increased as the operating time is prolonged.

The maximum operating time in the patient who is a good surgical and anaesthetic risk should never exceed forty-five to sixty minutes if the morbidity and mortality is to be kept low. However, patients who exhibit signs of failure of the circulatory system, such as cyanosis, dyspnoea on slight exertion and congestive râles in the lung base, are poor anaesthetic risks. The only surgical procedures contemplated in these patients should be those of a life-saving measure with the operating time reduced to a minimum.

The depth of anaesthesia is likewise

important, for if it is necessary to maintain a patient in deep surgical anaesthesia for more than thirty minutes, a majority of them will expire postoperatively as the result of anesthetic and surgical shock.

In the immediate postoperative period efforts should be made to maintain body heat and adequate oxygenation. The senile patient will frequently be breathing with great difficulty, due to the extreme relaxation which will persist into the postanesthetic period if he has been too depressed during anaesthesia. Such fatiguing efforts drain the patient's cardiac reserve while he is suffering from oxygen want and carbon dioxide excess.

Sedation and stimulation should be kept at a minimum. The use of vasopressor agents is to be condemned unless definitely indicated. The maintenance of body fluid should be maintained, and if the oxygen-carrying components of the blood have been lost they should be replaced with blood. Fluids should be administered slowly so that the already weakened heart is not overtaxed by a sudden influx of fluid.

The use of sedatives for pain should be restricted to the actual needs of the patient. It has been found that administering opiates from routine orders has frequently resulted in dangerous depression from which the patient finally expired. The barbiturates particularly should be avoided in the postanesthetic period.

In conclusion it can be stated that in elderly patients the chances of survival following operation and anaesthesia are good if they have elective surgery. The clinician and internist who defers operation in an aged patient and allows the condition to re-

quire an emergency procedure is not giving that patient the favourable chance for survival consistent with good medical practice.

DIET, NUTRITION AND DENTAL CARIES

by CARL I. SEBELIUS, D.D.S., M.P.H., Nashville, Tennessee

Summary of Paper in Journal. of D. for Children 3rd Quarter, 1949.

1. Dental caries is a disease of the calcified tissues of the teeth caused by acids resulting from the action of microorganisms on carbohydrates. The process is most complex because of the many variables involved.

2. Commercial propaganda should be critically studied before being followed.

3. Calcium withdrawal has not been demonstrated after the teeth have formed.

4. Nutritional status does not seem to have a significant bearing on the caries process.

5. It has been demonstrated that vitamin D is of value in the formation of the hard dental structures including the teeth themselves, while the existing intakes of vitamins A, B and C within the United States probably have no significant effect upon the development of teeth in man.

6. The ingestion of calcium and phosphorus in amounts sufficient to prevent skeletal defects will be adequate for the formation of teeth with normal composition and structure in the average well child; however, it is true that calcium and phosphorus metabolism is far from being completely understood at this time.

7. Fluorine no doubt shows the most promise as a means whereby the ingestion of an element during tooth development may serve in turn as a partial protection against the caries process.

8. The restriction of sugar, either refined or natural, is effective in the control of dental caries.

9. A person susceptible to dental caries who ingests refined sugars throughout the day will have more caries than the sporadic eater if the other variables are the same.

10. Children should eat a protective diet to promote normal growth and development, not to prevent dental caries. The sugars should be kept low to help control dental caries.

CONCLUSION

In conclusion, from the information gathered in regard to diet, nutrition and dental caries, the following appropriate slogan might well be adopted:

"EAT A PROTECTIVE DIET TO PROMOTE NORMAL GROWTH AND DEVELOPMENT: KEEP THE SUGARS LOW TO HELP CONTROL DENTAL CARIES."

COPPER AMALGAM DOES NOT BELONG IN DENTISTRY FOR CHILDREN

by ROSS F. SCHARFENBERG, D.D.S., M.S., Flint 4, Michigan

Conclusions of paper in Jour. of D. for Children, 2nd quarter, 1949.

The preceding discussion of scientific investigations concerning the various properties and characteristics of copper amalgam permits the following conclusions:

1. Regardless of the manipulation, copper amalgam sets more slowly than silver amalgam.

2. Copper amalgam always contracts upon setting.

3. Copper amalgam is germicidal

simply because it is slightly soluble in oral fluids.

4. Since copper amalgam is soluble, it tends to wash out of the cavity.

5. Experimentally copper amalgam was shown to cause marked tissue reactions.

6. Since it is slow to set, copper amalgam is difficult to pack and also it is difficult to do anatomical carving.

7. Copper amalgam does cause a staining of tooth structure.



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Editorial

HEALTH SERVICE IN GREAT BRITAIN

The Practitioner of London has published a one hundred and eight page book on the National Health Service Act in Great Britain, a review of the first year's working. The editors of The Practitioner feel that they are well qualified to produce an impartial review as they recognize no politics and speak for no group or organization.

This survey is of particular interest because it outlines the results of one of the greatest ventures in medical history, the British National Health Service inaugurated on July 5, 1948, and we must admit that its operation will have a profound effect upon the practice of medicine and dentistry in this country and throughout the world.

The report states that there is no doubt that great numbers of patients benefited by this service, but it has proved expensive, and in the case of dentists so expensive that a regulation was made to reduce their remuneration.

The report points out that there is tremendous competition for trainee appointments for specialization that knowledge crammed for the sake of passing examinations has replaced wisdom learned at the hands of experience and that there is bound to be a greater tendency to please one's chief rather than to satisfy the demands of conscience. Furthermore, that while the young doctor is materially secure and has fewer worries than his pre-war colleague, he cannot be quite sure that he has not sold the soul of his ideals for a mess of financial pottage in his youth.

In discussing the results of this Service from a dental standpoint we must

remember that this scheme was put into operation against the advice of the profession. The report states that two indisputable facts stand out regarding the first year's working of the general dental service. The first is that a very much larger number of the public received dental treatment during the year than ever received it before in any one year. The second is that a great number of dentists earned much higher incomes during the year than they earned in any previous year but despite the two facts mentioned most dentists look back on the year with somewhat mixed feelings while all regard the future with some considerable concern.

The report emphasizes that all dentists taking part in the service have worked much harder, and for much longer hours, than ever before, that with appointment books filled for months ahead it was extremely difficult to treat emergency cases, that many dentists have found that their health has suffered and also that the goodwill of their practices has seriously depreciated as they have not been able to give the same service as formerly.

Ignoring the top-class practitioner, many of whom have not entered the service, it is stated that the dentists in the industrial areas, where work is largely confined to extraction and replacement, welcomed the Service as patients who for years were unable to afford dental service were now able to secure the same with a definite improvement in health. Estimates, of course, had to be submitted and were duly authorized within ten days to two weeks. It is interesting to note that there were eight dentists on the Dental Estimates Board and that authorizations went through at the rate of 16,000 a day.

In the mixed middle-class practice the work is largely conservative in nature and these dentists felt that they were receiving adequate fees for conservative work according to the report, but that trouble began when they wished to undertake any work other than amalgam or silicate fillings and normal scaling, such as a gold inlay, crown, periodontal treatment, etc. In these cases an estimate had to be submitted and it might be a month or six weeks before it was approved. In many cases the Board required an examination by a Ministry dental officer and that it was not uncommon to wait two or three months for approval. As a result there was a great temptation to give up the endless struggle for the right to give the patient the best treatment and take the line of least resistance.

The third class of dental practitioner who has been affected by the introduction of the Service is the School Dental Officer. The report states that a newly qualified dentist, without any experience, commanded in private practice a starting salary which was much higher than the School Officer could hope to obtain after twenty to thirty years in the school dental service, which resulted in the virtual breakdown in the very important School Dental Service. The report points out, and rightly so, that it is scientifically wrong as well as economically unsound, to provide dentures for octogenarians while allowing the teeth of the rising generation to be neglected.

The future is being viewed with anxiety and concern because it is becom-

ing obvious that the controlling factor in the future is going to be an economic one. If the costs are too high the remedy will be a lower scale of fees and the danger of further curtailment of professional freedom and judgment. According to the report there is already evidence that some of the decisions of the Estimates Board are based on economic considerations rather than on the clinical judgment of the dentist submitting the estimate. All of this leads to annoyance, irritation and frustration.

Under a scheme of this kind as is pointed out, millions of people may secure dental service who otherwise would not receive the same, still that cannot be commended if as a result irreparable damage is caused to hundreds of thousands of school children and if the service is going to deteriorate both in quality and in the range of treatment which will be permitted with deplorable results to the dental health of the nation and to future generations of practitioners in the art and science of dentistry.

There is much talk about some such similar scheme in this country but it is very much to be hoped that any plan advanced will safeguard the public health and build up, rather than tear down, the high dental standards which it has taken years to achieve; that by all means our children and priority groups will be ensured the dental treatment required, and that capable young men may still be attracted to the practice of dentistry on account of the opportunities to serve their fellowmen in a satisfactory manner.

It must be obvious to all who give these matters even casual consideration that a strong well-organized Canadian Dental Association and an informed, interested membership is essential if proper direction is going to be available when we are faced with the question of dealing with these problems.

M.H.G.

BOOK REVIEWS

Internal Medicine in Dental Practice

by Bernard I. Comroe, A.B., M.D., F.A.C.P., late Associate in Medicine, University of Pennsylvania; Leon H. Collins, Jr., A.B., M.D., F.A.C.P., Associate in Medicine, University of Pennsylvania, and Martin P. Crane, B.S., M.D., Chief Physician, Misericordia Hospital, Philadelphia and Instructor in Medicine, Univ. of Pennsylvania School of Medicine. 550 pages. Third edition, thoroughly revised with 81 illustrations and 6 coloured plates. Published by the Macmillan Company of Canada Limited. Price \$7.80.

The authors point out that by a routine examination of the mouth alone one may note the chancre, mucous patch, or gumma of syphilis; the strawberry tongue of scarlet fever; the smooth glossy tongue of anaemia and sprue; the pigmentation in Addison's disease; the pallor in the severe anaemias;

the cyanosis in congestive heart failure, congenital heart disease and polycythemia; the dryness in diabetes mellitus, fevers, mouth breathers and dehydration; the recurrent canker sores in allergic individuals; the ulcerations of acute leukaemia and agranulocytic angina; the characteristic lesions encountered in drug sensitivity or poisoning; the glossitis of severe anaemias of pregnancy, dysentery, and simple achlorhydric anaemia; the yellow pigmentation most evident along the margins in obstructive jaundice; the tumours of paralysis agitans and hyperthyroidism; the sharp, quick jerky movements of the tongue in chorea; the hypertrophied gingivae following the use of dilantin; the scars of epilepsy and many other signs of systemic disease.

Consideration has been given in this book to the endocrines, the treatment of thyroid disease, infectious diseases, subacute bacterial

endocarditis, diseases of the blood, the general subject of antibiotics.

These authors have attempted to present a "speaking knowledge" to the dentist as to the manner in which internal medicine can be of service to him and his patient.

In these days when prevention is the key note in the practice of dentistry, this book should prove most helpful to the dentist who desires to succeed. M.H.G.

Nutritional Data (Formerly "Nutrititional Charts") compiled by Harold A. Wooster, Jr. and Fred C. Blanck (Mellon Institute, Pittsburgh). Published by H. J. Heinz Company, Pittsburgh, Pa., U.S.A. First edition 1949. 120 pages. Plastic bound. Gratis.

This present edition has been completely rewritten, brought up to date, and offered in a more convenient form than the "Nutritional Charts" published and distributed by H. J. Heinz Company since 1934. Twelve editions and 650,000 copies of these charts were distributed and have been adopted as a teaching aid by a majority of the medical schools in the U.S.A.

The increasing emphasis on proteins is reflected by a new section on this subject. The material on vitamins, essential elements, intermediary metabolism and many other topics has been modernized. One should note particularly the tables on "Composition and Nutritive Value of Foods."

This book has been compiled to present in convenient form the basic principles and facts of nutrition. Each year adds new knowledge to the very important subject and the application of this information is of vital importance to the dentist himself as well as to his patients. This book should be read by all those interested in diet. M.H.G.

Histopathology of the Teeth and their

Surrounding Structures by Rudolf Kronfeld, B.S., M.D., D.D.S., late Professor of Dental Histology and Pathology in the Chicago College of Dental Surgery, Loyola University. Third edition, revised and re-edited by Paul E. Boyle, D.M.D., Professor of Oral Histology and Pathology, The Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania. 514 pages. 464 illustrations. Published by The Macmillan Company of Canada Limited. Price \$9.60.

The purpose of this book as outlined by Kronfeld is to illustrate by means of human specimens the actual tissue changes that correspond to certain well-defined clinical conditions. For example, a cavity is prepared and a filling is inserted. What tissue changes can be expected to follow this operation? It is the hope of the author that by introducing the clinical aspect of these problems, instead of merely describing microscopic specimens, to facilitate the understanding of many clinical manifestations and practical observations.

The following subjects are discussed: Tooth Anomalies; Tooth Calcification; Enamel Hypoplasia; Hutchinson's Teeth and Mottled Enamel; Changes in Dentine and Pulp; Caries; Pulpitis; Acute and Chronic Apical Periodontitis; Tissue Changes following Root Canal Therapy; Cementum; Tooth Resorption; Gingival Crevice; Periodontal Diseases; Influence of Function; Tissue Changes in Orthodontia; Embedded Teeth and Cysts; Tooth Fractures; Healing of Extraction Wounds; Vincent's Disease; Tumours and Differential Diagnosis.

More recent contributions have been added to the bibliography and one can be assured that a perusal of this book will be well worth while. M.H.G.

Humanizing Our Great Profession

by Herbert Ely Williams, D.D.S., 288 Pages. Published 1949 by Dr. Williams, Red Bank, New Jersey. Price \$4.00 in U.S.A.

There is only one Herbert Ely Williams popularly known as "The Sage of Red Bank, N.J." Even a letter or a card from Dr. Williams mixed up with hundreds of other letters can be picked out instantly. He has been in active practice fifty-three years and still believes that "The sunshine of a smile must eclipse the moonshine of a frown." He loves humour and people. To a new assistant he says "Pearl, just snoop around the place and pick up a little by little. And if you should break something every day I'll never say a word because I want you to keep everybody happy and human around here."

"Uncle Herbie" as he likes to be called places dentists in three classes—"First, actively organized workers—the all wool kind. Second, the class that pays dues and helps carry on helpfully, but are noticeably absent. Third, an all wool but of little thinner quality and

are 'neutrally indifferent'—just sitting on the bench, neither playing ball or going to the showers. We make our living out of a live profession, so can't we live dentistry just a little livelier."

Dr. Williams says he has solved the collection problem. He believes that a woman with personality, tact, and uncommon sense is by far the best person to collect old accounts. A man debtor he says—a gentleman—will never offend a woman. He would prefer

making payments to having her on his trail.

Dr. Williams is 78 years of age, always operates sitting down and has lectured over 300 times to medical societies and for thirty years has appeared before dental organizations from Maine to Texas.

This book is not only full of wholesome humour but also wise advice to the dental practitioner; advice formulated by an observant and practical mind over many years of active service in the dental profession.

M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

Lt.-Col. W. G. Dawson who commanded No. 5 Company RCDC (RF) Headquarters, Halifax, N.S., for over three years has retired and is succeeded by Lt.-Col. J. R. Vaughan.

Captain J. W. Turner, a dental officer attached to H.M.C.S. "Ontario," Esquimalt, B.C., returning from Christmas leave, was very highly praised through the Canadian Press for his untiring efforts in organizing and administering first aid to the injured passengers in the recent train wreck in Southern Alberta.

In a recent routine change of personnel in the RCDC, Captain Graham Hamilton assumed

Command of No. 1 Central Dental Stores, Ottawa, and Captain J. W. Fletcher became the Quartermaster of No. 11 Company RCDC located in Calgary, Alberta. Captain Hamilton was the O.C. No. 1 Army Dental Stores and Captain Fletcher, the Adjutant of No. 19 Base Dental Company, Overseas.

R.C.D.C. Levee

The Officers of No. 3 Dental Company, R.C.D.C., Edmonton, held a New Year's levee at the Connaught Armories in Edmonton when they entertained over 300 guests.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

The Students' Register

The Students' Register in Table 1 shows student enrolment to be 1,034 which is an all time high for Canadian Dental Schools. It is interesting to note that the student body equals 22.5 per cent of the number of the whole profession in Canada today.

An examination of the numbers in the first three years of the course will indicate that the number of students in the schools is now at the highest point for several years to come. Table 3 shows an almost continuous increase in number for the past ten years. The schools have set a rather definite number to be admitted in future classes (Table 2). If all the facilities of the five schools are occupied by students the maximum number that can be accommodated is 812.

Some 323 will graduate this spring with approximately 293 graduating in the spring of 1951. Following 1951, approximately 200 graduates can be anticipated for the immediate

future years. The number of graduates during the last ten years has fluctuated considerably as will be observed in Table 4. The number of graduates in the next two graduating classes will almost equal the number of the preceding four years.

In Table 5 is given the distribution of students now in attendance according to the home address. The ratio of the number of students from a province to the population (1948) of the province is roughly as follows:

Newfoundland	one to 47,100
Prince Edward Island	one to 13,300
Nova Scotia	one to 18,700
New Brunswick	one to 21,000
Quebec	one to 15,400
Ontario	one to 10,700
Manitoba	one to 20,500
Saskatchewan	one to 9,900
Alberta	one to 9,300
Br. Columbia	one to 17,700 (10,300)

The ratio figure for British Columbia should

be qualified by the fact that a considerable number of students from this province attend schools in the United States. It is estimated that there are approximately 44 students from this province attending schools in the United States for the current year. If this figure is added to the number of students from British Columbia in Canadian schools, the ratio would be changed to one in 10,300.

During recent years the question has been raised as to how well the provinces are served by the dental schools. These ratios indicate that a province without a dental school may have more students in proportion to the population than a province with a dental school as is well illustrated in the case of Saskatchewan.

It is gratifying to note that the number of

graduates taking post-graduate courses has increased during recent years (Table 6). In addition to the information given in Table 6, there are 6 graduates taking the Course in Public Health (D.D.P.H.) this year. The establishment of courses for Dental Hygienists remains indefinite.

An additional table (Table 7) has been added to the Annual Students' Register, this year, giving the number of dental students in attendance at American Dental Schools. As will be observed only two of these schools report a number of more than three. The students in these two schools are practically all from British Columbia. If the number attending schools in the United States is added, the total number of Canadian Dental students for the year is 1,086.

TABLE 1

Total Enrolment of Undergraduate Students in the Dental Schools of Canada as of January 3rd, 1950

University	Freshmen	Sophomores	Juniors	Seniors	Men	Women	Total
Dalhousie University.....	12	12	12	12	46	2	48
McGill University.....	35	35	41	36	145	2	147
University of Montreal.....	60	47	63	55	225	0	225
University of Toronto.....	76	80	152	170	472	6	478
University of Alberta.....	35	26	25	50	135	1	136
Totals.....	218	200	293	323	1023	11	1034

TABLE 2

Maximum Number of Undergraduate Students that can be Accommodated in a Regular Class in Your School

Dalhousie University.....	12
McGill University.....	35
University of Montreal.....	60
University of Toronto.....	61
University of Alberta.....	35
Total.....	203

TABLE 3

Recapitulation of Undergraduate Enrolment in the Dental Schools of Canada 1940-1949 Inclusive

School	1940-1941	1941-1942	1942-1943	1943-1944	1944-1945	1945-1946	1946-1947	1947-1948	1948-1949	1949-1950
Dalhousie University....	31	25	25	22	28	27	38	37	41	48
McGill University.....	58	61	67	67	51	73	111	127	146	147
University of Montreal....	104	118	139	154	162	184	188	208	224	225
University of Toronto....	210	232	270	255	264	180	340	435	478	478
University of Alberta....	51	49	53	24	34	54	108	115	123	136
Totals.....	454	485	554	522	539	518	785	922	1012	1034

TABLE 4

Total Number of Graduates During the Years 1940-1949 Inclusive

School	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
Dalhousie University....	12	7	8	11	6	8	0	10	9	6
McGill University.....	13	18	9	26	12	13	5	18	15	34
University of Montreal....	23	14	31	18	37	30	41	36	38	45
University of Toronto....	56	45	40	103	61	58	56	75	24	75
University of Alberta....	13	13	32	8	24	7	0	10	13	20
Totals.....	117	97	120	166	140	116	102	149	99	180

For the Year 1949

	Male	Female
Dalhousie University.....	6	0
McGill University.....	34	0
University of Montreal.....	44	1
University of Toronto.....	74	1
University of Alberta.....	20	0
Total	178	2

TABLE 5

Distribution of Undergraduate Students by Provinces & Foreign Countries in the Dental Schools of Canada as of January 3rd, 1950

School	Pr. Edw. Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Brit. Columbia	Newfoundland	United States	Br. W. Indies	Br. Guiana	Bermuda	Haiti	Europe	China	Not known	Totals
Dalhousie University.....	3	27	10	1	0	0	0	1	0	4	0	0	0	0	0	0	0	2	48
McGill University.....	3	3	2	61	13	6	17	4	19	3	9	5	1	1	0	0	0	0	147
University of Montreal.....	1	2	11	184	7	1	2	0	0	0	11	0	0	0	2	4	0	0	225
University of Toronto.....	0	1	1	1	381	26	34	7	24	0	0	0	0	0	0	1	2	0	478
University of Alberta.....	0	1	0	0	1	4	33	79	18	0	0	0	0	0	0	0	0	0	136
Totals.....	7	34	24	247	402	37	86	91	61	7	20	5	1	1	2	5	2	2	1034

TABLE 6

Additional Students

	Dalhousie University	McGill University	University of Montreal	University of Toronto	University of Alberta	Totals
*Graduate during 1949....	0	0	0	15	0	15
**Post-graduate during 1949	0	0	122	84	0	206
Dental Nurses 1949-50... Is course for Dental Hygienists being planned?	0 under consideration	0 yes ?	0 yes—soon as budget obtained	25 yes indefinite	0 no reply	25

* The term "graduate" means proceeding to a degree.

** The term "post-graduate" means taking a course other than proceeding to a degree.

TABLE 7

Number of Canadian Students Registered as Undergraduates in American Dental Schools as of October 15, 1949

 Southern California.....	1
Loyola-Chi.....	3
Harvard.....	1
Tufts.....	1
Detroit.....	3
Oregon.....	33
Wash.-Seattle.....	10
Total.....	52

Resolutions From Quebec Council

"I have the pleasure of informing you that, at the last meeting of the Provincial Board of Dental Surgery held on December 16th, 1949, it was unanimously resolved that, starting January 1st, 1951, the College of Dental Surgeons of the Province of Quebec will pay the Canadian Dental Association the amount of \$15.00 per member in good standing with the College."

"I have the honour of informing you that, at the last meeting of the Provincial Board of Dental Surgery held on December 16th, 1949, it was unanimously resolved that the College of Dental Surgeons of the Province of Quebec tender the Canadian Dental Association the invitation of holding its 1953 meeting in the Province of Quebec, date and place to be determined later on."

"At the last meeting of the Provincial Board of Dental Surgery, I have received instructions to tender the Canadian Dental Association the sincere thanks of the College of Dental Surgeons of the Province of Quebec for its initiative of sending the transactions of the Association to each of its members."

Statement From Alberta Board

At a meeting of the Board of the Alberta Dental Association, the annual grant to the C.D.A. for 1949 was considered very carefully. The Board felt that there was an implied obligation to increase the grant on a per capita basis to the largest amount possible at this time, since the Board had, by resolution in 1948, stated that in its opinion the C.D.A. could not function properly to the best advantage of the profession, nor could it build any adequate reserves unless the corpor-members increased their grants immediately to a basis of \$25.00 per member per year.

The fact that Manitoba had immediately implemented this resolution by voting a \$25.00 per member grant for 1949, placed upon our Board the obligation to try to do likewise. However, since by our present Act we are limited to an annual license fee of \$35.00, and since the fee for 1949 had already been set by the Board meeting in 1948 and been paid by the members, discussion revealed that there was no possible way whereby the grant could be increased past the \$10.00 mark. A cheque computed on this basis has been forwarded to you.

For 1950, though, the fee could be increased to the full permissible amount of \$35.00, so with this background, the following resolution was endorsed by our Board:

"That this Board regrets its inability to follow the splendid lead given by Manitoba in implementing the resolution from this Board last year for increased financial support to our national body at this time.

That for 1949 the grant to the Canadian Dental Association shall be computed on the basis of \$10.00 per member of our Association,

AND further, that for 1950, the grant to the Canadian Dental Association shall be computed on the basis of \$25.00 per member of this Association,

AND that the secretary be instructed to inform the secretary of the Canadian Dental Association of this resolution and the explanatory preamble."

The British Plan

(Enough time has now elapsed in order that some assessment can be made of the workings of the British Scheme. A series of short articles on how the plan has functioned is planned to appear in the Governors' Letter. Below will be found a short summary of the first year of operation of the dental service. Other articles upon such subjects as the freedom of the professional man, the financing of the plan, discipline under the scheme, etc., will follow in future issues.)

Summary of

National Health Service Act

1st Year of Operation—Dentistry

Note—Present scheme put into operation against advice of profession.

Facts—1. Larger number of the public received dental treatment than ever received it before in any one year.

2. A great number of dentists earned much higher incomes during the year than they ever earned in a previous year.

POINTS:—

1. Demand for dental treatment resulted in dentists working long hours with notable effect upon health.

2. Dentists could not give service that regular patients formerly received—good will of practices seriously depreciated.

3. Dentists who tried to retain goodwill by continuing former type of service have seriously depreciated their income.
4. If private patient asked to await turn he is lost. If taken ahead dentist is given reputation of seeing patients on short notice who buy his services.
5. Dentists in industrial practice found legislation beneficial. Extractions and dentures freely approved without question.
6. Dentist with middle class practice found himself working on a balanced fee schedule for the first time. His difficulty is when he attempts to render a better service for a particular case where delay is unlimited for approval. It is unfortunate that the dentist who is trying to give the patient the full benefit of his training is handicapped. Dentists are becoming aware of type of treatment which will be approved without question so they avoid endless correspondence by taking line of least resistance.
7. The school service has broken down owing to lack of provision for dentists in that service.
8. Dentists—Insecurity.
 - (a) Evident that the controlling feature for the future will be an economic one.
 - (b) Now realized that Minister's remedy is

to lower the remuneration and there is no remedy against his action.

(c) Lowering remuneration means lower standard of service.

(d) In addition, an indirect method of economizing already exists, *e.g.*, number of films reduced, Substitution of post crown for jacket crown, etc. Extractions and dentures are considered non-recurring item of expense so appears to be favoured from standpoint of economy.

9. Discipline

(a) Minor matters take on grave proportions which are a source of annoyance and mean endless red tape—perhaps payment denied altogether.

(b) Honest practitioners are apt to find themselves subject to heavy fines.

Conclusion

1. Indirectly the teeth of thousands of children have been irreparably damaged.
2. The profession views the future with anxiety.
3. Restrictive regulations do little to curb a few unethical practitioners, but limit honest dentists drastically.
4. The fear is rapidly growing that the service will deteriorate both in quality and type of treatment permitted.

NEWS FROM THE PROVINCES

NEW BRUNSWICK

New Brunswick Dental Health Survey

The N.B. Dental Society has been given the go ahead sign for a health survey to be held in the province. The director of dental services for the Department of Health, Dr. R. Langstroth, has offered his services and that of his department to cooperate in any way possible. An advising and organizing committee was formed in Fredericton headed by Dr. Lewis Miller with Dr. B. R. Ross, Dr. A. T. Hinch and Dr. B. O'Brien assisting. Sub committees have been formed as follows: Government Health Grants—Chairman, Dr. Theo Godin in Campbellton; Dental Clinics in Government and other Institutions—Chairman, Dr. J. B. Gosnell; Role of the Dental Health Division in N.B.—Chairman, Dr. S. K. Wet-

more; Clinical Surveys of Children—Chairman, Dr. Lea Allanach; Dental Research—Chairman, Dr. J. F. Edgecombe.

A factual survey in the form of a questionnaire with eighty-six questions has already been distributed with a return to date of sixty per cent. It is anticipated a high return of this questionnaire will be forthcoming.

J. F. E.

NOVA SCOTIA

Sydney Dental Society

This Society at its January meeting listened to another discussion in the series, "Current Advances in Dentistry," now being broadcast by the University of Illinois.

The lectures are arousing great interest, several dentists from neighbouring towns now

having joined the group, the latest addition being Dr. Eric Whyte of Sydney Mines, a recent graduate.

The members have expressed great satisfaction with this Post Graduate Course. They feel that they are listening to text books as they are being written, the pros and cons of theories, and new techniques, being discussed often by their originators. S. D. FLORION

Halifax Dental Society

The meeting held on January 12 took the form of a quiz, the following having been appointed to attempt to reply to a variety of questions on various phases of dentistry. Drs. W. W. Woodbury, J. S. Bagnall, G. H. Rice, W. C. Oxner, A. G. Nutlay, and H. M. Eaton.

The executive headed by the President, Dr. James McGuigan, who acted as quiz master, was versatile and ingenious in the variety of questions.

A general discussion on many of the subjects proved of considerable interest and amusement.

Appointment:

Lt.-Col. G. W. Dawson has been appointed by the Provincial Government as "Director of the Division of Dental Services" for Nova Scotia.

Data is now being gathered, after which the service will be in operation. W.C.O.

BRITISH COLUMBIA

B.C. Dental Association

The annual convention of this Association, together with the annual meetings of the Association and of the College of Dental Surgeons of British Columbia, will be held at Kamloops on May 5-6. The Program and Arrangements Committees are well advanced with their plans, and the meeting should prove to be one of the most interesting in the history of the Province.

At this point, nothing definite may be announced as to the details of either program or entertainment, but we are assured that there is no lack of excellent clinical material lined up. The Arrangements Committee plans something special in the way of entertainment, in ranchland style. The opening of the new Hope Princeton highway will prove an additional attraction to motorists going from the lower

mainland to Kamloops, offering a scenic route never before available.

With the establishment of joint headquarters for the College of Dental Surgeons, the British Columbia Dental Association, and the Vancouver and District Dental Society in the new commodious offices in the Medical-Dental Building in Vancouver, the opportunity for the setting up of a Provincial dental library is welcomed. A strong committee has been appointed, under the chairmanship of Doctor Keith Lindsay, of Vancouver, and a budget will be prepared at once. Books and periodicals in the library will be available to every practising dentist in the Province.

Fraser Valley Dental Society

The Fraser Valley Dental Society enjoyed the presentation of a clinic on gold inlays, given by Doctor L. W. Beamish, of New Westminster, at their February meeting.

Vancouver and District Dental Society

Dr. Fitzgerald, of the staff of the University of California, spoke at afternoon and evening meetings of this Society in February. His afternoon meeting consisted of a preliminary lecture on the technique of placing x-ray films in positions parallel to the long axis of the teeth, using the extension cone on the tube, followed by a demonstration of this method, on a patient. His evening lecture was divided between interpretation of x-rays and indications of the advantages of the method of film placement advocated by his department. Doctor Fitzgerald is a capable and entertaining speaker.

For its next meeting, the Society will hear Doctor Skinner, of California, on gold inlays.

Kootenay Dental Society

Meetings of the Kootenay Dental Society have been temporarily suspended, during the very severe weather of the past winter, but will be resumed as soon as road and weather conditions permit. This Society operates under unusual difficulties, since the district is widespread, with relatively few practising dentists, and the nature of the country is not conducive to travel by road in severe weather. The members of the Society are to be congratulated on their efforts to keep the Society operating under such circumstances.

ALBERTA

Edmonton Dental Society

On January 10, this Society held its first meeting of the year. The weather was nearly blizzard condition, yet 52 members were present. The speaker of the evening was Dr. W. C. Whiteside, F.R.C.S., Thoracic Surgeon. His subject was "Foreign Bodies in the Bronchus," and was supplemented by lantern slides. A demonstration was also given showing the mechanism and use of endoscopic instruments. Much valuable information was received by all members from this lecture.

Information was given by a committee with respect to the introduction to this Society of an accident and insurance scheme which would take the form of a group policy. More of this will be explained later.

A brief from the Edmonton and District dental assistants was read to the meeting showing the discrepancies in the various salaries given to assistants throughout the district.

A brief was also introduced by a committee from the Edmonton and District Dental Laboratory Owners which gave the history of their organization and their prospective plans.

On February 6 the Society sponsored a clinic in the afternoon and evening at the Macdonald Hotel. This clinic was on "Procedure for Gold Inlays by the Direct Technique," and was presented by Dr. W. H. Gyllingberg from Longview, Washington. In the evening a demonstration was given on cementation and many useful tips were derived which can be used in everyday practice.

The clinic started at 2 P.M. and continued until 5.00, when there was a refreshment hour between 5.00 and 6.00.

After a break for refreshments, a steak dinner was enjoyed by all, and later Dr. Gyllingberg continued with his clinic. A remarkably large turn-out was noted, dentists coming from many outside points.

A study group in the McGrane techniques for full dentures composing Drs. H. Knight, V. Lloyd, S. Hodgson, H. Scott, and W. Janzen of the Edmonton and District Dental Society made a trip to Saskatoon and Regina putting on all-day clinics demonstrating this technique to the dental societies of each city. This study group has been in existence now for over two years and has worked out an

exceedingly interesting method of putting on this clinic. The presentation is divided into four steps, each man explaining one of the steps with an introduction at the first by Dr. Harold Knight and a summarization of the technique at the end by Dr. Janzen which is followed by a question period.

In Saskatoon 41 turned out for the clinic, there being visitors from outside points, and in Regina men came from the southern part of the Province and also the city of Moose Jaw.

W. E. A.

Lethbridge Dental Society

The January meeting of this Society was held in the Medical Dental Building. Two films from the Novocol Chemical Co. were shown. The topics were, "Mandibular Anaesthesia" and "Infraorbital Anaesthesia." These excellent films were very much enjoyed by all present. Following the showing a short business session was held.

R. A. RYLANDS

SASKATCHEWAN

Regina Dental Society

The regular meeting of this Society was held on December 13 in the Kitchener Hotel with Dr. R. C. Brett presiding.

Out of respect to the late Dr. W. C. Parker, a moment's silence was observed.

Minutes of the previous meeting were read and adopted. A letter from the Edmonton Study Group was read asking if the Society would be interested in a clinic on Full Denture Service. This offer was accepted.

A motion was made congratulating Dr. L. D. Fasken on the recent honorary degree bestowed on him at the A.D.A. meeting in San Francisco of the F.A.C.D. In a very modest fashion Dr. Fasken said that he felt that the honour given him should also be looked upon as an honour to the members of the local and provincial societies, which had been of great assistance to him throughout the years.

The guest speaker, Dr. C. N. Weicker spoke on "Some Observations on the Service of Dentistry." He gave many highlights of his practice since 1906 and particularly referred to Orthodontia, Exodontia and Prosthetics. His address was most interesting and appreciated by all.

The officers for the year 1950 are: President, Dr. R. O. Brett; Vice-President, Dr. H. R. Kerr; Sec.-Treas., Dr. H. Robb. L. D. H.

Regina and Saskatoon Dental Societies

These two Societies were hosts to many dentists from the surrounding districts at clinics put on by a Study Club from the city of Edmonton. This study club comprising Dr. Harold Knight as Chairman, Dr. Vic. Lloyd, Dr. Stan Hodgson, Dr. Hudson Scott and Dr. Wm. Janzen presented afternoon and evening sessions on "The Basic Principles of the McGrane Full Denture Procedure."

- a. Preliminary Impression—Dr. Stan Hodgson.
- b. Final Impressions and Primary Centric Occlusion—Dr. Harold Knight.
- c. Positive Centric Occlusion using the intraoral Pin Tracer—Dr. Vic Lloyd.
- d. Try-in-Aesthetics and Phonetics—Dr. Hudson Scott.

Second Session—

- a. Laboratory Technique in the McGrane Procedure was described.
- b. Highlights of the Clinic including the Pin-Tracer.
- c. Question Period.

Many dentists travelled considerable distances, some even as far as 200 miles, to attend, and all were spontaneous in their praise of the contribution by these men. Their presentation was practical for the average office. These gentlemen apart from the contribution to Dentistry get a real bang out of their study club, and they urge other fellows to do the same.

L. H.

MANITOBA

Winnipeg Dental Society

This Society is to be commended for its agenda of subjects to be discussed this winter, and congratulated for its selection of speakers so far. In January Dr. J. T. Cohen of Minneapolis discussed some of the more recent preventive dental measures. His talk was an evaluation of the attempts at prevention by several research groups. He was not too enthusiastic about some of it. The main criticism being the intolerance exhibited by one group for the other groups' theories.

This month of February, which is still young, Dr. George A. Ellsperman of Bellingham, Washington, Critic for the Vancouver Ferrier Gold Foil Club advocated another type of preventive measures. This was the use of gold foil to prevent the loss of the human tooth after caries had attacked it. Prior to the

use of the foil the cavity preparation was preceded by the application of the rubber dam in all cases without exception. Listening to Dr. Ellsperman one could readily imagine he was back at the Northwestern half a century ago listening to Dr. G. V. Black.

Both the January and February meetings of the Society were presided over by Dr. Bert Oja, the president and the speakers introduced by Dr. Orwell Brown. The attendance at these meetings which commence at 3 p.m. and after dinner continue for the evening is excellent.

J. F. M.

ONTARIO

Faculty of Dentistry News University of Toronto

Dr. Harold Keith Box has been accorded the signal honour of being elected an "Honorary Life Member of the American Academy of Periodontology."

Dr. Charles H. M. Williams will be an essayist at the Berkshire Conference on Periodontology and Oral Pathology at Eastover, Massachusetts, June 13 to 17, 1950. This conference is being conducted by Tufts College Dental School, Postgraduate Division, under the direction of Dr. Irving Glickman and staff.

Fellowship in Dentistry for Children

For those dentists who can meet the entrance requirements of the School of Graduate Studies of the University of Michigan, two fellowships in graduate dentistry for children are made available. Each provides for twelve months of formal graduate study at the W. K. Kellogg Foundation Institute of Graduate and Postgraduate Dentistry, at the University of Michigan (September 1, 1950, to August 31, 1951).

Qualifications for a fellowship are, "a sincere interest in dentistry for children and the achievement of an undergraduate academic record which places the candidate scholastically in the upper third of his graduation class. Such an achievement should approximate a B average in grades. All applications should be addressed to Kenneth A. Easlick, Professor of Dentistry, School of Dentistry, University of Michigan, Ann Arbor, Michigan.

Dr. G. Harold Holmes

The death of Dr. George Harold Holmes marks the passing of a well known and highly

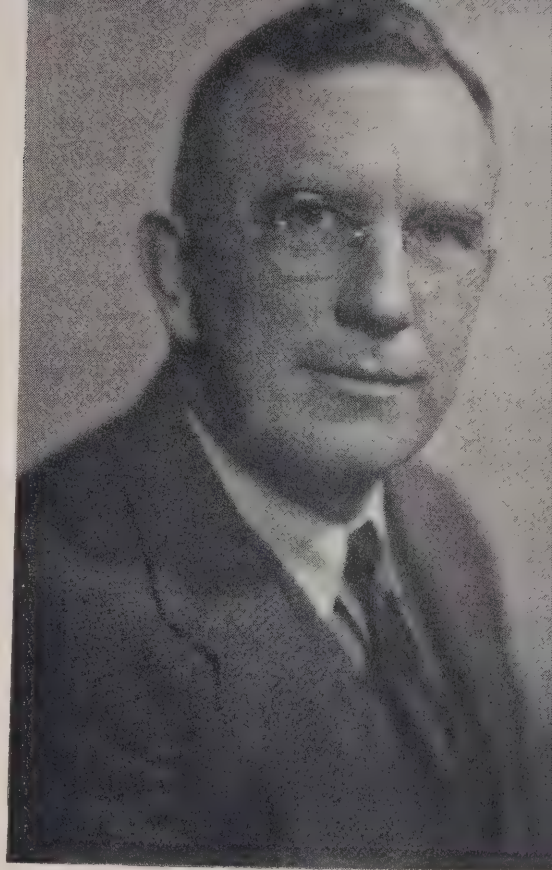
respected dentist and citizen of the city of Owen Sound.

The Owen Sound Daily Sun Times writes:— "His death brings to a close a distinguished professional career in the field of dentistry and also a life devoted unselfishly and efficiently to the betterment of this community in all its phases. Despite the demands on his time and energies made continuously by a thriving professional practice, Dr. Holmes lost no opportunity to serve the city in which he lived."

Dr. Holmes was born at Kleinburg in York County, Ontario. He was graduated at Toronto in 1905 when he went to Owen Sound to become associated with Dr. Cavanaugh of that city. Later he established his own practice through which he won good will and esteem of both patients and colleagues alike. In a tribute to him Dr. Clarence Bebee, a fellow practitioner, writes—"He more than anyone else was responsible for the good fellowship among the profession in our district. When we took our problems to him, they were always straightened out in complete harmony and satisfaction to all concerned. He was always anxious to help the young man starting and he was very modest and retiring about it. We will miss him very much." In 1926 Dr. Holmes was elected to represent his colleagues on the board of the Royal College of Dental Surgeons of Ontario where he served with distinction. He was returned several times and one term he served as chairman. He retired from practice in 1938 to become Registrar of North Gray, which position he held at the time of his death.

Not only did Dr. Holmes have a distinguished career as a dentist but he was respected and recognized for his many community interests. For more than a quarter of a century he was a member of the hospital board and served a number of years as its chairman. He was a member of Owen Sound Rotary and one of its Past Presidents. He was a member of the Board of Directors of Gray and Bruce Trust and Savings Co. He was a member and a past master of North Star Lodge A.F. & A.M., and a member of Georgian Chapter, Royal Arch Masons. He was a member of Division St. Church.

He was an early member of Owen Sound Golf and Country Club and has served as its president. He was an ardent sportsman



DR. F. W. CLEMENT

being particularly interested in hunting and fishing. Lawn bowling and curling were also among his favourite relaxations.

Dr. Holmes is survived by one daughter, Mrs. Thomas Goodland of Edmonton, Alberta. But he leaves behind him a kindly memory among many friends, colleagues and associates with whom he has lived gently, fruitfully and generously.

T. R. M.

Dr. F. W. Clement

Dr. F. W. Clement of Toledo, Ohio will be a guest clinician at the Dental Oral Surgery Course, at the Faculty of Dentistry, University of Toronto on April 17-21.

Dr. Clement is a graduate in Medicine from Toronto and was for some years on the staff of the dental faculty on the subject of anatomy. More recently he has been specializing in anaesthesia and is a recognized authority on nitrous oxide administration.

He is presently chairman of the section of anaesthesia of the American Medical Association.

Ladies' Auxiliary to the Academy of Dentistry, Toronto

This Association held a bridge, fashion show and lucky draw at the Arcadian Court, February 18. Proceeds were in aid of Dentistry for needy children with dental abnormalities.

Mrs. W. W. Philip, President of this Auxiliary, presided at a luncheon at the Royal York Hotel, January 20. Mrs. W. D. Tucker was the guest speaker.

KATHERINE TREADWELL

Dr. Don Gullett Honoured

On June 21, 1949 at a meeting of the British Dental Association held at Scarborough, England, an honorary life membership was conferred on Dr. Gullett by the members of the Association. This is an honour extended very seldom!

Workman's Compensation Board of Ontario, Adopts Revised Schedule of Dental Fees

For some months a Committee of the Board of the Royal College of Dental Surgeons of Ontario has been negotiating with the Workman's Compensation Board relative to revising the dental tariff. Revision is now complete and in effect; New forms are being printed and each Ontario dentist will receive a copy setting forth the regulations and allowable fees for dental services to people entitled to dental care due to injury from an accident.

The new schedule is as follows—

Emergent treatment:

(a) Gum laceration:	
First treatment	\$3.00
Subsequent treatment	1.00
(b) Repair of fractured denture	6.00
(Plus \$1.00 for each tooth supplied.)	
(c) Repair of broken facing according to type	\$3.00-6.00
Examination, Diagnosis and Report	2.00
(This fee will not be allowed in respect to the repair of dentures or broken facings.)	
Administration of gas for extraction	5.00
Extraction per tooth (while under gas anaes.)	1.00
Extraction one tooth with local anaes.	3.00
Each additional tooth at same sitting	1.00
(Fee allowed in each case to cover post-operative treatment where necessary.)	
Devitalization of pulp and filling of root canal ..	8.00
Gold inlay where specially indicated ..	12.00
Silicate fillings with cement case	4.00
Amalgam fillings, simple or compound (specify)	\$2.00 to 4.00
Cement lining	1.00

Crown restoration:

(a) Gold with cast occlusal	15.00
(b) Richmond type	15.00
(c) Cast three-quarter or full	15.00
(d) Cast with silicate facing	18.00
(e) Cast with acrylic facing	20.00

Fixed bridge restorations:

Abutment as (a) (b) (c) (d) (e) above	
Pontic	12.00

DENTURES

Complete upper or lower acrylic	50.00
Partial denture service:	

Designs for all partial cases must be submitted justifying estimated fee.

(a) Acrylic type with minimum of 2 gold clasps	\$30.00 to \$50.00
(b) Upper or lower partials with cast gold bar and 2 clasps with acrylic saddles	65.00
(c) Partial lower with gold wrought bar and 2 clasps	55.00

Rebase denture:

(a) Complete upper or lower	20.00
(b) Partial denture	15.00

X-Ray Service:

The following fees are for radiodontic examination made by a dentist. No fee will be allowed for x-ray films submitted that are of unsatisfactory diagnostic value. A written report accompanied by x-ray films must be submitted to this Board.

X-RAY SERVICE

(a) Single tooth area	2.00
(b) One quadrant of mouth	4.00
(c) Complete upper or lower	6.00
(d) Complete survey (minimum of 14 films)	10.00

QUEBEC

The Montreal Dental Club

The 52nd Annual Meeting of this club was held on December 12 in the R.C.D.C. Mess with 110 members in attendance. Following a complimentary dinner, the business meeting took place with the president Dr. A. D. Richardson in the chair. It was decided that a "Dr. R. B. Bell Memorial Bowl" should be presented annually to the most valuable player of the McGill Hockey Team in memory of Dr. Bell, a past president of the Montreal Dentist Club and former coach of so many champion hockey teams of past years. Honorary Membership was bestowed upon Dr. Arthur L. Walsh in recognition of his outstanding contribution to dentistry in general and to the M.D.C. in particular. Honorary memberships were also bestowed upon Dr. J. McK. Wathen and Dr. A. W. MacClelland having completed 35 years of practice. Dr. M. L. Donigan reported on the 25th Annual

Fall Clinic and announced that the 26th would be held in the Mount Royal Hotel Montreal, October 18, 19, 20, 1950 . . . Officers for the club for 1950 were elected as follows:

Past President	Dr. A. D. Richardson
President	Dr. S. A. MacSween
President-Elect	Dr. C. R. Seller
Secretary	Dr. H. L. Mussells
Treasurer	Dr. E. S. Dorion
Historian & Archivist	Dr. C. C. Bourne

Executive Committee:— Drs. F. O. Fredrick, D. W. Henry, R. T. Lamb, A. F. Cameron, J. McCutcheon, H. T. Oliver.

The regular monthly meeting of the club was held in the R.C.D.C. Mess January 23. Two interesting presentations were made, reviewing clinics presented at the recent Annual Fall Clinic of the Montreal Dental Club: Dr. A. W. MacClelland reviewed the paper of Dr. J. A. Salzmänn of New York, on "Preventive Principles in General Practice," (Orthodontia) and Dr. R. F. Harvey the paper of Dr. J. R. Conant, of the United States Navy, on "The Surgical Treatment of Periodontoclasia." . . . The President announced that the Annual Winter Meet would be held the week-end of February 24th, at the Alpine Inn, Ste. Marguerite's, Quebec.

Mount Royal Dental Society

A general meeting of this society was held at the Mt. Royal Hotel on January 20.

The meeting consisted of a morning session from 10 a.m. to 12 a.m. and an afternoon session from 2 to 5 p.m.

Guest clinician was Dr. Jack B. Miller associate of Dr. Bastien of New York City.

Dr. Miller spoke on Ceramics illustrating his subject with slides and coloured films.

Dr. Miller devoted the morning session to the porcelain jacket crown and the afternoon session to porcelain bridgework. He highlighted his presentation with a detailed comparison of porcelain to acrylic.

In this report he stressed two points,—

- (1) that porcelain was far superior to acrylic aesthetically.
- (2) that acrylic whenever it was in occlusal contact wore through in a short period of time.

Montreal Endodontia Society

The monthly meeting of this society was held in the Dental Lecture Hall, McGill University on January 30.

Dr. Winston Churchill Bushell, Chief of Staff of the Faculty of Dentistry of McGill University gave an illustrated lecture describing a series of unusual accidents to teeth and the method he employed to restore them to usefulness.

We are constantly receiving impressions by all our senses—by touch, sight, sound, taste, and smell—and all of these impressions are experience.

Experience comes to all. It comes equally to rich and poor, old and young, just and unjust. Yet some learn from it no more than a reflex existence, the knowledge to eat and sleep and breed, to read the thoughts of others on the printed page or live the emotions of others on the lighted screen, to exchange a small assortment of hackneyed phrases with other robots. Some build up knowledge and become wise: they develop a personal outlook that enriches others and adds to the store of their time. The reason for these differences lies not in the quality of the seed but in that of the soil on which it falls. Impressions are fleeting things. They cannot live unless they are welcomed, studied, compared, classified, and grouped. Experience can be made useful only by certain qualities of the mind, some given by inheritance, some by parental example, some by the influence of teachers or writers.

Let us remember that experience is never finished and wisdom is never complete; that we are always more likely to meet the common than the unusual, but that what appears at first to be a simple and familiar clinical problem may yet be something we have never met, even something hitherto unrecorded; that no problem is so straightforward that it does not need careful study, or so difficult that some solution will not appear if we seek steadfastly.—Sir Heneage Ogilvie, K.C.B., M.Ch., F.R.C.S., in Br. Med. Jour., September 24, 1949.

DENTAL ASSISTANTS

Canadian Dental Nurses' and Assistants' Association

The next meeting of the C.D.N. & A.A. will be held in co-operation with the O.D.N. & A.A. Convention at the Royal York Hotel, Toronto, May 14, 15, 16, 17.

What this National Association proves itself to be, whatever influence it may exercise, whatever it may achieve in future development, will depend upon the dental assistant and her vision. How far-reaching are your ambitions for its success? Just in proportion as the dental assistants both individually and collectively co-operate with the plans, purposes and ideals of our National Association, just in that proportion will our progress and success be assured.

By co-operation and constructive work dental assistants not only help each other to make a success of this calling, but they add, very materially, to the success of the profession which they serve.

Co-operation is the lubricant of success, so plan to attend every session of this Convention, if at all possible, and take an interest in all the discussions.

Looking forward to meeting you there.

Irene Bruce
Secy.-Treasurer

Marion Edwards
President

NOVA SCOTIA

Halifax Dental Nurses' and Assistants' Association

At the January meeting of this association it was voted that the meetings held during 1949 proved to be highly instructive and interesting. The annual "rummage sale" and "penny auction" helped enlarge the Treasurer's account.

The highlight of the year, and the first of its kind, was the dinner held at the Lord Nelson Hotel, by the assistants for their dentists.

Dr. J. B. Hardie, of Pine Hill Divinity Hall, gave a very informative address on "Our Own Arabian World." Miss Merita MacDougall presided.

As January's meeting was strictly business, plans were made for the coming year.

New slate of officers for 1950:

President:— Chris McGee.

Vice-President:— Jean Loring.

Secretary:— Jessie Russell.

Treasurer:— Heather Graham.

— COMMITTEES —

Welfare and Sick:— Marjorie Fawler.

Membership:— Gloria Manseur.

Social and Program:— Connie Gates.

Refreshments:— Maxine Edwards.

Publicity:— Avis Ritcey.

ALBERTA

Edmonton Dental Nurses' and Assistants' Association

The annual dance held in mid-November was indeed a social highlight of the year. Its success is still a favourite subject of discussion among the dental assistants.

Miss N. Beckett and Miss M. Butterworth were in charge of arrangements.

It was encouraging to note the added number of doctors and assistants who were present at this social function. Such support is most promising, for it is felt that it is through such support and co-operation that a better and stronger association will be built.

The December meeting was the annual Christmas party held at the home of the president Miss Gerry St. Arnaud.

At this party, hampers of food and clothing were packed for some needy family. The Edmonton Dental Assistants are to be congratulated for their co-operation in contributing toward this hamper . . . their generosity surpassed all expectations.

A most enjoyable evening was spent. The hearty sing-song in particular had everyone in a festive mood. Mrs. Eileen Hill and Mrs. Pat Smither convened this social evening.

SASKATCHEWAN

Saskatoon Dental Nurses' Society

The regular meeting of this Society was held January 10 at 8.30 p.m. Dr. D. L. Gibson, Director of Dairy Husbandry at the University of Saskatchewan was guest speaker. He chose as his subject the Nutritional Value of Milk. An enthusiastic general discussion followed this address. Lunch was served later by the social committee. PAT HALVORSON

QUEBEC

Montreal Dental Nurses' and Assistants' Association

Dr. John W. Gerrie, Director of Plastic Surgery at the Queen Mary Veterans' Hospital, spoke to the Montreal Dental Nurses' and Assistants' Association on "Cancer of the Mouth" at the Mount Royal Hotel, January 9.

Dr. Gerrie traced the history of cancer problems in general and its apparent prevalence today, with particular reference to cancer of the mouth and to the dental office as its place of early diagnosis.

Good mouth care and oral hygiene seem to be effective measures for the prevention of cancer.

Should mouth cancer develop, its early recognition in the dental office may bring it to treatment in its early state.

Dr. Gerrie went on to say that many cases can now be cured and showed some excellent kodachrome slides showing some of the reconstructive work that can be done about the mouth and the patient saved even after the cancer has become far advanced.

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

The monthly meeting of this Association was held February 13 at Moore's. Professor J. A. Russell of the Manitoba University gave a most interesting talk on Interior Decorating.

The Winnipeg Dental Nurses' and Assistants held their fourth annual ball, Saturday, February 11, in the Crystal Ballroom of the Royal Alexander hotel. The music was by Charlie Cruickshank and his Orchestra. The patrons were:

Mayor and Mrs. Garnet Coulter.

Dr. and Mrs. P. Cleave, Neepawa.

Dr. and Mrs. H. R. Hurst, Brandon.

MISS KAY HOFFARD

President of the Winnipeg Dental Nurses' and Assistants' Association

Dr. and Mrs. K. M. Johnson.

Dr. and Mrs. J. Gordon Elsey.

Dr. and Mrs. J. M. Grahame.

Dr. and Mrs. A. Clare McInnes.

Dr. and Mrs. J. B. Rumberg.

Dr. and Mrs. Ernest Wallace.

Dr. and Mrs. W. H. Barber.

Mr. and Mrs. E. A. Robson.

Dr. and Mrs. W. J. Riley.

Proceeds were given to the Children's Hospital Fund.

F. JEFFREY

No man is worth his salt who is not ready at all times to risk his body, to risk his well-being, to risk his life, in a great cause.—Theodore Roosevelt.

If wrinkles must be written upon our brows, let them not be written upon the heart. The spirit should not grow old.—James A. Garfield.

It is much easier to be critical than to be correct.—Benjamin Disraeli.



EMPIRE NEWS

GREAT BRITAIN

Looking Forward

Condensed from Editorial in Br. D. Jour. Jan. 6, 1950

The year which is opening will long be memorable in the annals of the profession and the Association. Seventy years after the first incorporation of the British Dental Association it has become, once again, the representative body of the whole organized profession.

The events of the past few weeks render it possible to look forward to a determined attempt being made to resolve the impasse which has threatened to bring the School Dental Service and the Maternity and Child Welfare Service into a state of virtual breakdown. Much, however, remains to be done before a satisfactory settlement is achieved and the decline in the number of public dental officers can be checked. When that has been accomplished the task of rebuilding the service will have to be undertaken and it seems certain that, whatever may be the outcome of the forthcoming negotiations on salaries, it will be some considerable time before the ground which has been lost during the past year can be regained. And until it is recovered and the priority services are further strengthened, the general dental services will be largely concerned with the treatment of disease much of which could have been prevented. The vicious circle created by the Health Service, against the advice of the profession, must be broken before an effective dental health service can be created.

Dentist Sent to Gaol

Howard Lloyd Bevan of Llandoff was found guilty at the Glamorgan Assizes on nine counts of obtaining money by false pretences under the National Health Service. He was sentenced to two years imprisonment and ordered to pay £250 towards the cost of the prosecution. In his defence Bevan said that the false entries on the forms were due to mistakes made by his wife who had made out the claims. It was stated in court that Bevan had been paid £10,874 14s. 2d. in the first six months of the Health Service and had

treated 939 patients. His Counsel said that Bevan's normal working day had been from 9 a.m. to 9 or 10 p.m. This was the second time Bevan had been tried, the jury having failed to agree at the first hearing.—*Br. D. Jour. Jan. 6, 1950.*

Medical Care in England

"Medical care in England has become more easily available to the general population since the introduction of the National Health plan, but it has suffered a serious decline in quality. This was the main impression brought back by Dr. John W. Cline, past president of the California Medical Association, after a three weeks' visit to England.

"As far as that aspect of public health which depends on medical care, I think the Health Plan is going to have a great adverse effect," Dr. Cline told a press conference at the Palace Hotel November 30. "Patients are rushed through the doctor's offices so fast that inadequate diagnoses often result," he continued. "I think there will possibly result an increase in diseases which lend themselves to cure when a proper, early diagnosis is made."

"Dr. Cline was in England as a delegate of the American Medical Association. The quality of medical practice is suffering because each doctor is handling far too many patients in order to make an adequate living, Dr. Cline said. "The Health Plan has encouraged malingers and hypochondriacs beyond all belief," Dr. Cline asserted. "Hospitals are overloaded because doctors, after only a cursory examination, often pass the buck and send patients to hospitals when they don't really require hospitalization." Dr. Cline said he had heard of British doctors treating as many as 120 patients in a single day.

"Though British doctors would like to see many changes in the health program, they are not as opposed to the general idea of this system as one would suppose," Dr. Cline said. "Since 1911 they have been used to the panel system—which is governmental in nature."—*San Francisco Chronicle* 169:4 December 1, 1949.

GENERAL NEWS

International Peace Garden

Dr. V. Rondeau of Rouleau, Saskatchewan has been working on a plan for a monument to the "Prince of Peace" to be erected in the International Peace Garden in the Turtle Mountains astride the International Boundary between North Dakota and Manitoba.

The Garden was dedicated in July 1932, when approximately 25,000 people with bowed heads subscribed to the following pledge:

"To God in His Glory

We two nations dedicate this Garden and pledge ourselves that as long as men shall live we will not take up arms against one another."

Dr. Rondeau has painted a design for his suggested monument which he is submitting to the proper authorities for consideration. He is also urging that a day be set aside in Canada to be known as "World Peace Day".

Dental Caries Reduced 50 and 60 Per Cent

Tooth decay can be reduced between 50 and 60 per cent by the relatively simple process of brushing and rinsing the teeth immediately after eating, Dr. Leonard S. Fosdick, Northwestern University chemist, reported in *The Journal of American Dental Association*.

Dr. Fosdick's report was based on a two-year research study conducted by a group of dental investigators among 946 men and women students at Simpson College, University of Louisville and Drake, Emory and Northwestern universities.

During the test period, an experimental group of 523 students brushed their teeth with a neutral tooth paste within 10 minutes after eating, or if that was impossible, rinsed their mouths thoroughly with water. The other 423 students served as a control group and merely continued their normal oral hygiene habits, most of them brushing their teeth upon arising and before retiring.

X-ray examinations at the end of the first year revealed that the experimental group had developed an average of only .8 new cavities compared with an average of 2.2 new cavities for the control group, a reduction of 63 per cent. At the end of the second year, x-ray

examinations revealed the experimental group had 60 per cent less new cavities than the control group.

The results, Dr. Fosdick said, provide additional support for the generally accepted theory that dental decay, mankind's most common disease, is initiated by an acid formed rapidly in the mouth from fermentable carbohydrates such as sugar. This acid, he said, may be present on the tooth surface within three minutes after eating sugar, reaching a maximum intensity within about 20 minutes and persisting for from 30 to 90 minutes.

"It should be recorded that in general all of the individuals in both the test and control groups had soft drinks and candy readily available during the day with the exception of one control group. This factor was reflected in the variations from group to group.

"The control (group) in the school where candy and soft drinks were not available had a caries increment far below the averages reported previously in similar work. In those institutions where a water fountain was close to the soft drink and candy dispenser, less carious surfaces were found in both control and test groups than in groups where water was absent."

Dr. Fosdick described as "striking" the fact that a large number of individuals developed very few cavities or none at all during the test period.

Fluoriding Water Supply

Eight cities in the state of Wisconsin are now fluoriding their public water supplies. Twenty-nine more have approved the plan and are now installing the necessary equipment. Eighteen other cities have introduced ordinances looking to the same procedure. Without doubt, some, if not all, of these communities will soon have fluorine in their water supplies. This is an extraordinary achievement and is the direct result of the enthusiasm of the Wisconsin dentists. It is also an indication that dentists can influence municipal action when they make the effort.

A program of this extent should soon provide the evidence necessary for a critical evaluation of artificially supplied fluorine.—Editorial in *N.W. Dent.* Jan. 1950.

Candy And Soft Drinks in Schools

The sum that Minnesota school children spend for soft drinks and candy is estimated to be "16 times as large as the amount now being spent by the Minnesota Department of Health on the state dental program, including the Askov Dental Demonstration."

Approximately 5,400,000 bottles are sold annually within the Minnesota schools, or an average of 18 bottles per student. A total of 9,990,000 candy bars are sold each year, or an average of 33.3 per student. At 5 cents per item for both the soft drinks and the candy, the schools are doing a \$769,500 business—\$270,000 for soft drinks and \$499,500 for candy.—*A.D.A. News Letter*.

U.S.A. Children's Health Day

The joint resolution of the U.S.A. Congress approved on February 1, 1950, provided as follows:

"That the President of the United States is hereby authorized to issue a proclamation setting aside February 6, 1950, as National Children's Dental Health Day and to invite all agencies and organizations interested in Child Welfare to unite upon that day in the observance of such exercises as will call to the attention of the people of the United States the fundamental necessity of a continuous program for the protection and development of the dental health of the nation's children."

Dr. Fishbein Retires

"December 6 officially marked the end of what is sometimes referred to as the 'Fishbein era' in the history of organized medicine in America. That he will continue his activities on an undiminished scale was indicated by the number of activities he expects to engage in. These include the following: Consultant medical editor for Doubleday & Co.; Professor of medical history, writing and economics at the University of Illinois and the University of Chicago; editor-in-chief of *Excerpta Medica*, an international abstract of medicine and surgery published in English in Holland, and editor of the *Bulletin* of the World Medical Association. He will also continue writing his syndicated column, as well as editorials for *Post-Graduate Medicine*, for which he will revive his medical Pepys' diary, 'Tonics and

Sedatives,' eliminated from the *Journal of the AMA* in June. In his spare time he will continue writing medical books and resume his public speaking which the AMA ordered him to discontinue.

"While no official sum was given out, it is learned on high AMA authority that Dr. Fishbein will receive \$15,000 a year for life and a paid up \$50,000 insurance policy, in addition to a regular pension to which all long-time staff members of the AMA are entitled. The trustees paid high tribute to Dr. Fishbein for his thirty-seven years of 'devoted service to the American Medical Association. The fact that the *Journal* (of the AMA) is now the outstanding medical publication in the world,' the trustees' statement read, 'is due to Dr. Fishbein's editorial genius. The American Medical Association and the entire medical profession owe him a debt of gratitude.'" —*New York Times*.

Psychosomatic Sleep

One hundred and seven dentists here in the Northwest and twenty-three in nearby Canada have been trained in the use of hypnosis in dental operations. Most of them are using the technique. More are being trained at the present time.

We conservatively estimate that several thousand dental operations have been done. No serious trouble has been reported, no untoward effects have been observed, no legal complications have arisen.—Editorial in *N.W. Dent.* Jan. 1950.

Candy Makers Upset

It appears that American candy manufacturers are upset over the actions taken by the dental profession to improve the dental health of the general public through a balanced diet. The following article appeared in *Consumers' Research Bulletin* last September.

"The candy manufacturers are getting set for a big campaign to counteract what they refer to as 'prejudices' of physicians, dentists and nutritionists. Instead of telling people that candy is delicious, they will concentrate on the theme, 'Candy has its rightful place in the diet.' It appears that something must be done, according to *Tide* magazine, in 'direct retaliation' to such efforts as the Amer-

ican Dental Association's phonograph records for school children which use stars like Bing Crosby and Bob Hope to warn against soft drinks, candy and other sweets. It is interesting to speculate on the prospect that the more successful the candy manufacturers are in their program, the more business the dentists will have!"—*Bul. of Oklahoma State Assoc.*

Candy Consumption

The per capita consumption of candy in the United States has fallen this year from 18.2 pounds a person to only 16.7 pounds according to the Department of Commerce. We cannot help but speculate on whether this reduction is due to recession in spending for luxuries or whether dentists may begin to congratulate themselves upon the effectiveness of their health education.—From Editorial in *N.Y. Jour. of D.*, Feb. 1950.

Points to Hazards in Use of Hormone Drugs

Widespread use of ACTH and cortisone in the routine practice of medicine would be extremely undesirable at present, according to the American Medical Association's Council on Pharmacy and Chemistry.

A council report in the *Journal of the A.M.A.* states that although chronic toxicity studies are far from complete, it has already been established that the continuous administration of either preparation over a long period often cannot be tolerated.

Prompt and dramatic relief has been provided in arthritis, gout and other diseases, but the report points out that the improvement is usually maintained only as long as the administration of the drug is maintained.

It is stated that both agents have been responsible for the development of severe mental unbalance, while there is some evidence that continued administration of ACTH might result in irreversible sugar diabetes of a high insulin-resistant type. Also, high blood pressure has been noted in persons treated with ACTH.

"Another hazard in the use of either cortisone or ACTH is the general pituitary-adrenal disturbance which occurs during prolonged administration or with a relative high dosage schedule," the report states. It says further that when the administration of these drugs is discontinued there may be a rebound effect,

the initial symptoms of the disease recurring with even greater severity than before.

"In the present state of our knowledge it would be extremely undesirable to permit widespread use of these potent preparations in the routine practice of medicine, and it is perhaps fortunate that neither drug is now available in unlimited quantities," the council states.—Health League of Canada.

National Health Insurance

As a result of his current survey of medical insurance systems in European countries, Oscar R. Ewing, Federal Security Administrator, will recommend certain changes in the Administration bill, now before Congress, for compulsory health insurance. The United States survey group accompanying Mr. Ewing now feels that the patient should pay part of the cost of medical service not to the doctor but to the insurance fund. Both the Swedish and Swiss medical insurance systems apply this principle, although in different ways.

"Opinion of doctors in all countries has been unanimous," Mr. Ewing stated, "what ever their complaints against the details of medical insurance, that the public is being greatly benefited thereby." More than three and a half million of the 4,300,000 population of Switzerland are completely covered by medical sickness insurance. This is done entirely through voluntary insurance groups, some with no more than a dozen members. The Swiss cantons (local governments) bear part of the cost of the system, but it is mostly self-supporting. Doctors have nothing to do with its administration. The patient chooses his own doctor, pays for medicines and equipment but never sees the doctor's bill. He gets a daily indemnity, graduated according to his contribution, for illness or injury.—*N.Y. Times* 99:5C per Public Health Economics.

Dental Service in Hospitals

According to Col. Marhl H. Welch, chief of dental service at Letterman General Hospital, San Francisco, every hospital should have a dental service, just as it has surgical, medical, and other allied services. At least, a competent oral surgeon and dental diagnostician should be available to each hospital. In addressing the dentists at the 90th annual

session of the American Dental Association, he said, "The dental service naturally should vary with the size and type of the hospital and the service rendered. For example, crippled children's hospitals and mental hospitals would provide only emergency service.

I hope to see our profession taking its place more and more in the routine as well as the specialized field of hospital practice," he said. "But, to do this, its members must prepare themselves to fit into the hospital team."—*Oral Hygiene*, December, 1949.

IN MEMORIAM

William James Hall, of Mimico, Ontario, aged 51, died from a heart attack January 25.

He was a veteran of the First World War and following graduation in Dentistry commenced practice in Mimico. He was active in the Mimico-New Toronto Rotary Club and Anthony Sayer Lodge, A.F. and A.M.

Dr. Hall is survived by his widow and one son.

George Harold Holmes of Owen Sound, Ontario, died in Owen Sound Hospital on January 13 at the age of 69.

Dr. Holmes was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1905 and immediately began to practise in Owen Sound. Over the years he made for himself an enviable reputation as a dentist and became recognized as a distinguished and public spirited citizen of his community. In 1938 he retired from his practice to become registrar of North Grey.

He was a past chairman of the Board of the Royal College of Dental Surgeons of Ontario, a past president of the Rotary Club and the Owen Sound Golf Club, member of the Board of Directors of Grey and Bruce Trust and Savings Co., and for 25 years a member of the Hospital Board.

Dr. Holmes is survived by one daughter, Mrs. Thomas Goodland of Edmonton, Alta.

(See further Ontario News)

James George Bannerman of Owen Sound, Ontario, aged 85, died on January 13.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1886. He took up practice at Bradford until 1890 when he moved to Owen Sound where he continued to practise until shortly before his death.

Dr. Bannerman was an honorary life member of the Royal College of Dental Surgeons of Ontario.

Dr. W. Miller died in Carroll, Iowa, January 10, 1950. He was born at Morrisburg, Ontario, on July 2, 1880. He attended University at Buffalo, New York, and was graduated from the Dental College in Washington, D.C., in 1900. He practised in Alberta, Saskatchewan, in the Northwest Territories, but of late years had more or less retired from active practice and resided on his farm at Tomahawk.

He was a man who liked the wide open spaces and in 1922 took his instruments along and visited all the Hudson Bay posts down the McKenzie River to Herschel Island, later coming out by the northern route west and south through Bering Strait.

He was a member of the Church of England.

Dr. Miller is survived by his widow, one son, and two grandsons.

Preston Peter Winn of Alvinston, Ontario, died suddenly on January 27.

Dr. Winn was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1899 and practised in Alvinston for more than 50 years. He received his early education in Kitchener where he was a classmate of the former Prime Minister of Canada, the Honorable William Lyon Mackenzie King.

Romeo Beland, Montreal, Que., aged 51, was killed in an automobile accident on January 28.

Cecil Merritt Snelgrove of London, Ontario, aged 53, died suddenly February 1. He was a past president of the London Rowing and Bowling Club and a member of the Canadian Club, the Gyro Club and the King Street United Church.

Dr. Snelgrove is survived by his widow, three sons and two sisters.

RECHERCHES SUR LA STRUCTURE DE LA DENTINE HUMAINE

par BERTRAND KEREBEL, Landerneau, Finistère, France

"L'homme n'est l'homme qu'à sa surface. Lève la peau, dissèque: ici commencent les machines. Puis tu te perds dans une substance inexplicable, étrangère à tout ce que tu sais et qui est pourtant l'essentielle.

C'est de même pour ton désir, pour ton sentiment et la pensée. La familiarité et l'apparence humaine de ces choses s'évanouissent à l'examen. Et si, levant le langage, on veut voir sous cette peau, ce qui paraît m'égare."

PAUL VALERY

Il est classiquement admis que l'ivoire dentaire est un tissu mésenchymateux minéralisé traversé par des canalicules renfermant des fibres organiques; entre ces canalicules, une substance relativement homogène est constituée par des fibrilles collagènes au sein d'une masse calcifiée.

Les beaux travaux de l'Ecole Suisse ont brusquement combattu cette conception (R. JACCARD et M. GROSJEAN: Structure de la Dentine, RMSO, 4; 1942):

Il n'existe dans l'ivoire ni canalicules, ni fibres de Tomes. Les images classiques sont erronées. Elles résultent de la technique employée, décalcification et sectionnement au microtome, ou aussi de superposition d'images, comme dans les coupes minéralogiques vues en lumière traversante.

En coupe longitudinale axiale, il existe des prismes à parois organiques contenant des sels inorganiques solidifiés.

En coupe transversale, c'est un réticulum qui correspond à l'existence des

prismes dentinaires morphologiquement semblables aux prismes de l'émail.

Ces conclusions révolutionnaires, mais aussi trop absolues, n'ont eu aucun succès. On en restait à la conception classique. Aussi a-t-on dû revenir à Genève sur l'étude de la dentine (HELD, GROSJEAN, JACCARD et PERIER: Nouveaux documents sur la structure prismatique de la dentine, suivis d'un essai de synthèse entre le concept prismatique et la théorie classique." RMSO II: 1947):

A la méthode de GROSJEAN ET JACCARD, examen des surfaces polies en lumière réfléchie, révélées pendant quelques secondes par HCL à 5 p. 1000) les chercheurs suisses adjoignent la méthode classique d'examen des coupes décalcifiées. Ceci permet à HELD de modifier les conclusions précédentes et, sans renier la conception classique, d'intégrer les idées neuves de JACCARD, PERIER et GROSJEAN:

Les examens en lumière réfléchie font apparaître la structure réticulaire de

l'ivoire. L'examen des coupes décalcifiées, vues en lumière traversante, montre les canalicules et les fibres de Tomes. Les deux structures coexistent.

Remarquons tout de suite que le problème n'est pas résolu. On nous offre une hypothèse, un "essai" (au dire de HELD lui-même) et non une conclusion de travail. On s'est borné à *supposer* que ces résultats différents obtenus par deux méthodes d'examen ne s'opposaient pas et ne s'excluaient pas.

Position du Problème

Le problème de la structure de l'ivoire demeure entier et 3 solutions sont possibles:

1—l'ivoire renferme des canalicules et des fibres de Tomes.

2—l'ivoire ne renferme ni canalicules, ni fibres de Tomes. Il est constitué par des prismes minéralisés à parois organiques.

3—la structure réticulaire et la structure canaliculaire coexistent. Reste alors à expliquer leur coexistence.

Discussion

Discutons d'abord l'argumentation des chercheurs suisses. GROSJEAN et JACCARD (1942) ont soutenu que la superposition des images dans les coupes vues en lumière traversante créait des artefacts; ils ont ainsi repoussé les résultats bien classiques que donnent cette méthode. En 1947, les mêmes auteurs remarquent cependant une concordance assez parfaite entre certaines images de l'émail observées en lumière réfléchie et en lumière traversante pour qu'ils puissent utiliser cette dernière méthode comme moyen de contrôle.

Puisque la méthode — lumière traversante — est satisfaisante pour l'examen de l'émail, les artefacts sont d'autant moins à craindre pour la dentine que ce tissu est beaucoup moins minéralisé. L'étude de la dentine peut donc, sans trop de risques, s'effectuer par les méthodes classiques, qui ont fait leurs preuves en histologie générale.

GROSJEAN et JACCARD produisent d'ailleurs deux microphotos sensiblement identiques de l'ivoire, l'une en lumière

réfléchie, l'autre en lumière traversante.

Si la méthode d'examen microscopique en lumière traversante ne donnait que des artefacts, c'en serait fait et du compromis de HELD et de toute l'histologie passée. Au contraire, si la méthode d'examen microscopique en lumière réfléchie semble une méthode de choix pour l'étude de l'émail, tissu très minéralisé, elle ne saurait suffire pour l'étude de la dentine qui renferme 30 p. 100 de matériel organique.

Le procédé d'examen employé par GROSJEAN et JACCARD n'ayant révélé ni canalicules, ni fibres de Tomes, ces auteurs en ont conclu que ni canalicules, ni fibres n'existaient dans la dentine. N'est-ce pas là une affirmation téméraire? Ne peut-on se demander si la méthode de GROSJEAN, qui n'a pas fait ses preuves, est la mieux adaptée à l'étude de la dentine?

La concordance des résultats obtenus par l'examen microscopique en lumière traversante des coupes décalcifiées et des coupes meulées les plus fines, l'étude de l'ivoire au microscope électronique prouvent l'existence des canalicules et des fibrilles de Tomes. (SCOTT and WYCKOFF: "Electron microscopy of tooth structure by the shadowed collodion replica method." Pub. Health Rep. 2; 1947).

Recherches personnelles

Nos examens microscopiques ont tous été faits *en lumière traversante*, en cherchant les plans de section les plus favorables. Notre étude a porté exclusivement sur des dents humaines par le procédé des coupes minéralogiques usées, et polies (avec ou sans révélation par l'acide, avec ou sans attaque par la pancréatine) et par le procédé classique des coupes décalcifiées.

Quel que soit le sens de la section, qu'elle soit meulée ou décalcifiée, épaisse ou mince, colorée ou non, il est facile de mettre en évidence les canalicules de l'ivoire. Les sections transversales (surtout décalcifiées) montrent bien les fibrilles de Tomes. On est ici dans le très connu. Nous, nous arrêterons plutôt à cette "substance étrangère" dont parle

VALERY, à ces images microscopiques, dont l'aspect inhabituel constitue ici tout le problème.

Examen des coupes décalcifiées

Sur certaines sections colorées à l'hémat-éosine, nous avons trouvé une apparence prismatique (plus exactement polyédrique) de la structure de l'ivoire (fig. 1 et 2).

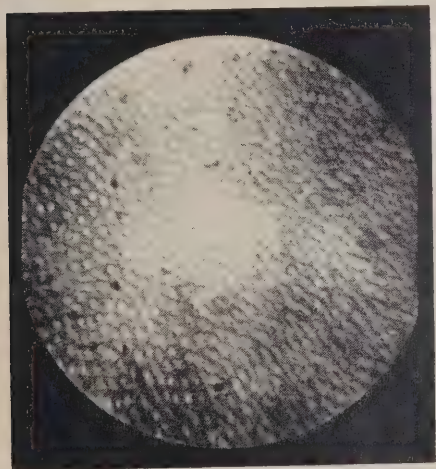


FIG. 1—Coupe décalcifiée colorée: hémat-éosine. A gauche: structure canaliculaire; au centre: structure "prismatique."

La fig. 1 montre: à gauche, la structure canaliculaire classique; au centre, la structure "prismatique" de connaissance récente. Peut-être ne s'agit-il que d'une déformation des canalicules? L'image n'en est pas moins curieuse. Elle est assez nettement superposable à l'image d'une coupe de l'émail non encore calcifié et également coloré à l'hémat-éosine. Même structure "prismatique". Le corps du "prisme" est en clair, son pourtour en foncé. Par analogie avec le prisme de l'émail, le prisme de l'ivoire serait donc minéralisé, sauf dans son revêtement organique.

C'est par la méthode classique et avec d'autres arguments la conclusion de GROSJEAN et JACCARD.

Toutefois, les coupes colorées au Malory ne nous ont pas encore permis de

confirmer cette analogie morphologique entre l'émail et l'ivoire.

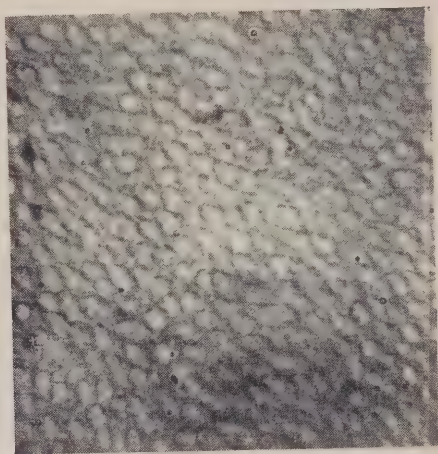


FIG. 2—Agrandissement de la partie centrale de la fig. 1. "Prismes" de l'ivoire sensiblement analogues aux "prismes" de l'émail.

Examen des coupes usées et polies

Pour éluder les objections américaines, selon lesquelles la structure réticulaire de l'ivoire serait due à des artefacts provoqués par l'attaque acide, nous avons attaqué certaines coupes à l'étuve dans la Pancréatine.

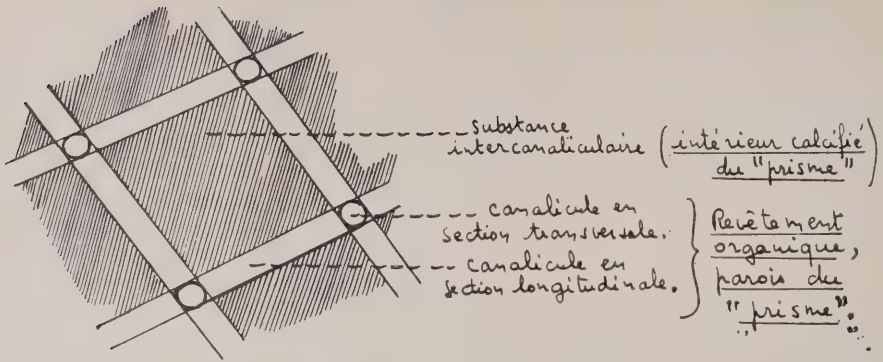
La fig. 3 montre en section oblique, les canalicules qui délimitent des espaces homogènes minéralisés en forme de losanges; c'est déjà la structure polyédrique que l'on discerne.

La fig. 4 montre plus nettement les espaces "prismatiques" homogènes, délimités par les canalicules; en noir, quelques troncs principaux de fibres de Tomes sont aplatis sur la coupe.

En section oblique, l'aspect polyédrique de l'ivoire est bien mis en évidence après une attaque de quelques secondes dans une solution d'HCl à 5 p. 1000 environ (fig. 5).

On peut donc déjà discerner dans l'ivoire des canalicules et des "prismes" homogènes minéralisés.

La structure réticulaire de l'ivoire est bien visible en section transversale dans



la fig. 6. Sans doute retrouvons-nous là cette "structure caractéristique en nid d'abeille analogue à la structure de l'émail" décrite par GROSJEAN et JAC-CARD. Il est toutefois impossible que les parois organiques des prismes soient constituées par autre chose que les canalicules; en effet, seuls les canalicules contiennent de telles fibres organiques. Les colorants injectés, se retrouvent uniquement dans les tubulis et non dans la substance intercanaliculaire, que l'examen microscopique montre homogène et minéralisé.

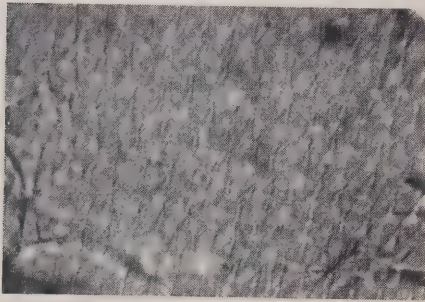


FIG. 3—Section usée et polie, attaquée par la pancréatine. Coupes obliques des canalicules, délimitant des espaces homogènes minéralisés.

Enfin, nous avons pu démontrer que les structures canaliculaires et réticulaires coexistent et expliquer la structure globale de l'ivoire (fig. 7, 8 et 9) selon le schéma suivant, ce que n'avaient pu montrer les travaux antérieurs:

Ce sont les ramifications canaliculaires, en clair, qui sectionnées longitudinalement

ou transversalement, donnent à l'ivoire sa structure réticulaire.

La substance intercanaliculaire constitue le corps du "prisme"; les canalicules, son revêtement, ses parois.

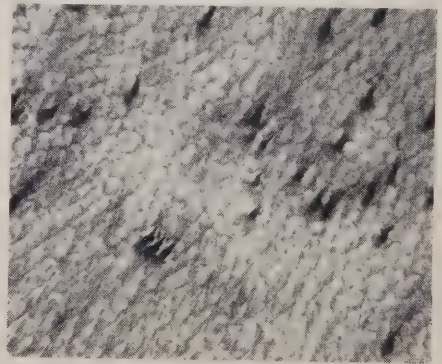


FIG. 4—Section usée et polie. Structure polyédrique de l'ivoire; quelques fibres de Tomes, en noir.

Des coupes fines et l'action brève et brutale d'un acide nous ont permis d'isoler des fragments d'ivoire assez analogues aux prismes, que l'on dissociait jadis dans l'émail. (fig. 10).

Malgré cela, l'embryologie, les analyses physiques et chimiques, les expériences à l'aide des isotopes radioactifs, l'histologie classique et l'histologie au microscope électronique différencient nettement la dentine de l'émail.

On voit combien aujourd'hui les connaissances morphologiques de l'ivoire étaient restées fragmentaires et incomplètes!

On s'était borné à répéter inlassablement le même travail que les pionniers de l'histologie, chacun se limitant à comparer esthétiquement les images qu'il ob-

usées (le polissage avec la technique des minéralogistes est venu récemment) l'histologiste était ombrublé par les fibres de Tomes et leur trajet classique cent fois

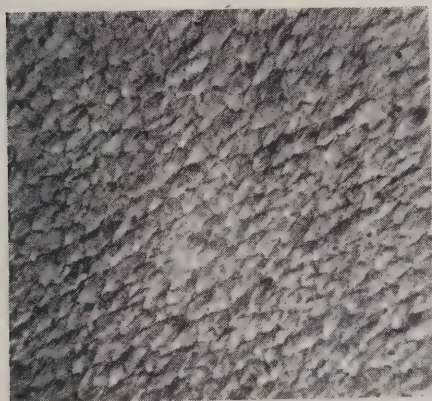


FIG. 5—Section usée et polie, attaquée quelques secondes par sol. HCl, 5 pour 1000. Structure polyédrique de l'ivoire. (x 780 environ, agr.)

tenait à celles des Maîtres. C'est ainsi que le plus souvent, les coupes n'étaient faites que suivant le grand axe longitudinal, vestibulo-buccal ou encore sagittalement.

Cette routine a conduit à un travail stérile. Sur les coupes assez grossièrement

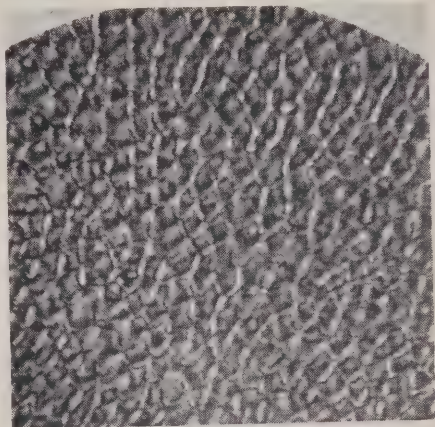


FIG. 7—Section usée et polie. Structure canaliculaire et réticulaire de l'ivoire.

décrit. Nulle description ne s'écartait de cette habitude.

La même routine a empêché HOPEWELL-SMITH (et tous ceux qui ont lu son ouvrage . . .) de discerner la structure réticulaire de l'ivoire pourtant très apparente dans les fig. 155 et surtout 157 et 158 (du tome² de son ouvrage "Pathological Histology of the mouth," J. & A. Churchill, 1919).

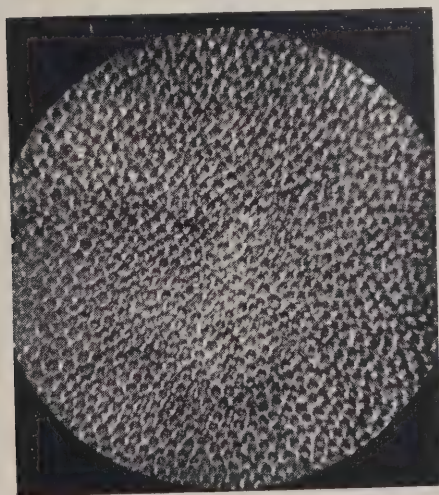


FIG. 6—Section usée et polie, attaquée quelques secondes par HCl, 5 p. 1000. Structure en nid d'abeille de l'ivoire, en lumière traversante.

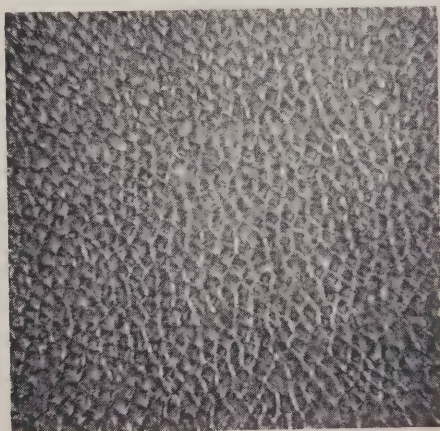


FIG. 8—Section usée et polie. Structure canaliculaire et réticulaire de l'ivoire.

De temps à autre pourtant, un chercheur isolé avait, à l'insu de tous semble-t-il, entrevu une autre structure de l'ivoire.



FIG. 9—Section usée et polie. Structure canaliculaire et réticulaire de l'ivoire.

Ainsi H. SCHULTE (Zeitschr. für Zellf. a. mikr. Anat. X, 1930) a observé un aspect réticulé de la dentine du crocodile au voisinage de la jonction émail-ivoire.

Conclusions

C'est le mérite des chercheurs suisses d'avoir remis en question l'histologie de la dentine.

La méthode GROSJEAN qui leur a permis de révéler en lumière réfléchie une structure réticulaire de la dentine ne peut cependant être utilisée que comme un complément de la méthode classique. Utilisée seule, elle est insuffisante en histologie dentaire, puisqu'elle est incapable de montrer les canalicules et les fibres de Tomes, dont le microscope électronique, après les examens classiques, a confirmé l'existence; elle est une cause d'erreur puisqu'elle a conduit GROSJEAN, JAC-

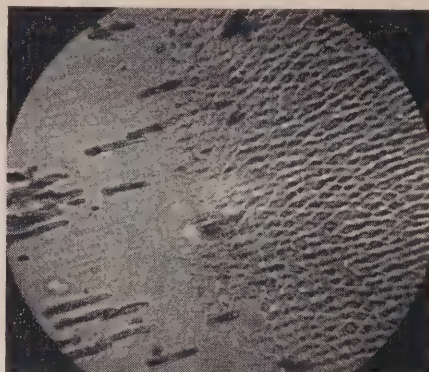


FIG. 10—Section très fine usée et polie, après attaque acide. Dissociation de fragments d'ivoire analogues aux "prismes" de l'émail.

CARD et PERIER a nier l'existence de la structure canaliculaire de l'ivoire.

En prouvant la coexistence des deux structures (canaliculaire et réticulaire) de l'ivoire et en montrant comment elles coexistent, nos examens microscopiques en lumière traversante permettent maintenant d'expliquer l'histologie globale de la dentine.

L'ivoire possède une structure canaliculaire et une structure réticulaire.

L'ivoire contient des canalicules ramifiés renfermant des fibres de Tomes.

Ces canalicules délimitent une substance homogène minéralisée.

Ils dessinent dans l'ivoire une structure réticulaire en section transversale: une structure polyédrique en section oblique.

L'enveloppe des polyèdres ("prismes") est constituée par les canalicules et leurs ramifications. Le centre du polyèdre est minéralisé, c'est la substance fondamentale minéralisée, c'est la substance fondamentale

Malgré l'analogie "prismatique", les différences fondamentales classiques entre l'émail et l'ivoire restent valables.

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Le Comité des Recherches de l'A.D.C.

Le Comité des Recherches de l'Association Dentaire Canadienne, aussi invraisemblable que cela puisse paraître, ne s'occupe pas directement de recherches, au sens vrai du terme. Ce Comité, constitué surtout de professeurs des facultés dentaires du pays, a réalisé depuis longtemps que des travaux scientifiques de nature à faire progresser le rendement de notre profession ne peuvent être menés à bien que par des individus préparés pour cette besogne et entourés du climat favorable.

Ce Comité a constaté que le Canada ne possède pas—ou peu—de dentistes susceptibles d'entreprendre et de compléter une oeuvre scientifique d'envergure. Aussi la tâche primordiale du Comité des Recherches est la formation d'un personnel de chercheurs, possédant les aptitudes et le goût nécessaires à ce genre d'occupation.

Ce Comité aide pécuniairement de jeunes diplômés, qui lui sont recommandés par les facultés d'enseignement. Ces jeunes confrères vont approfondir dans des centres de recherches étrangers certains problèmes—surtout de sciences de base—et reviennent dans nos écoles continuer leur travail scientifique et en faire bénéficier les étudiants.

L'entraînement d'une équipe de scientifiques n'est pas l'affaire de quelques mois. Cette assistance doit se poursuivre durant de nombreuses années et les résultats de cette semence apparaîtront dans un avenir plus ou moins rapproché.

Les argents nécessaires au soutien partiel des études de ces confrères proviennent de l'Association; d'autres organismes, comme le Dominion Dental Council, dote, de temps à autre, le Comité des Recherches de profits réalisés

par l'exercice de ses fonctions; des revenus supplémentaires lui est parfois remis par d'autres sources extérieures.

Le Comité de Recherches, pour l'heure du moins, ne dirige pas de projets de recherches proprement dites; il encourage des carrières scientifiques et compte sur le rendement de l'avenir.

Un autre organisation, le Conseil National des Recherches, possède une section dentaire et est en mesure de financer des expériences propres à améliorer les services de la profession dentaire.

Des projets de recherches sont soumis au Conseil, qui les examine, les évalue et les sanctionne, quand ils sont jugés raisonnables et de portée pratique. Mais là encore la pénurie des scientifiques véritables s'avère évidente et peu de travail est accompli dans ce domaine.

L'an dernier, on a confié au Comité des Recherches de l'A.D.C. la tâche d'approfondir la valeur de certains produits dentaires mis sur le marché à la disposition de la profession et du public. Ce travail de dépistage de la qualité de ces marchandises est entravé par le manque d'argent nécessaire à l'élaboration de réels laboratoires et le Comité est obligé de compter sur le Council on Dental Therapeutics de l'Association Dentaire Américaine.

Comme on peut le voir, les fonctions du Comité des Recherches sont gênées par des difficultés financières et c'est avec regret que la profession dentaire canadienne ne peut entreprendre d'avantage dans un domaine, qui prend de plus en plus d'envergure dans notre ère moderne.

Gérard de Montigny



Fédération Dentaire Internationale

La Fédération Dentaire Internationale, créée à Paris en 1900, célébrera son Cinquantenaire dans cette ville du 23 au 30 juillet 1950.

La Fédération Dentaire Internationale invite cordialement les Confrères Canadiens.

A la même époque, les 24^e Journées Dentaires de Paris tiendront leurs réunions scientifiques.

Dans le but de faciliter l'organisation de cette importante manifestation, nous serions heureux de connaître, aussitôt que possible, le nombre des participants, qui voudront bien nous honorer de leur présence.

Tous renseignements à:

Fédération Dentaire Internationale

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Paris 9^e, France.

Enrégistrement des étudiants en Chirurgie Dentaire

Le tableau No 1 de l'enrégistrement des étudiants en Chirurgie dentaire montre un chiffre total de jeunes gens aux études de 1034, représentant le plus grand nombre d'étudiants inscrits dans les Ecoles Dentaires canadiennes depuis toujours. Il est intéressant de noter que ce nombre représente 22,5% du total des dentistes exerçant au pays, aujourd'hui.

Un examen du nombre des étudiants dans les trois premières années indique que le nombre d'étudiants aux facultés est à son maximum pour plusieurs années à venir. Le tableau No 3 montre qu'il y eut une augmentation presque continuelle d'étudiants depuis dix ans. Les Ecoles ont établi un chiffre plutôt défini d'étudiants à être admis dans les classes à venir. (Tab. No 2) Si toutes les places disponibles sont remplies, le nombre maximum d'étudiants sera de 812.

Quelques 323 recevront leurs diplômes, au printemps, et 293 au printemps 1951. Après 1951, à peu près 200 diplômés finiront leurs études dans les quelques années, qui suivront. Le nombre des diplômés, au cours des dix dernières années, a considérablement varié, comme on peut le voir dans le Tableau No 4. Le nombre des diplômés dans les deux prochaines années égalera presque le nombre total des diplômés des quatre dernières années.

Dans le Tableau No 5, on a une idée de l'endroit d'où viennent les étudiants, en se basant sur l'adresse de leur domicile. Le pro rata du nombre des étudiants en rapport avec la population de leur provinces respectives s'établit à peu près comme suit:

Manitoba	1 "	20,500
Saskatchewan	1 "	9,900
Alberta	1 "	9,300
Colombie Britannique	1 "	17,700
		(10,300)

Les proportions de la Colombie Britannique s'expliquent par le fait qu'un grand nombre d'étudiants de cette province sont inscrits dans des Ecoles américaines. On estime qu'il y a environ 44 étudiants de cette province aux études aux Etats-Unis. Si ce nombre est ajouté au nombre d'étudiants inscrits dans des Ecoles canadiennes, la proportion varie à 1 par 10,300.

Durant ces dernières années, on s'est demandé quels services rendaient les Ecoles dentaires aux populations de leur province respective. Ces proportions indiquent qu'une province sans Ecole dentaire avait plus d'étudiants en rapport avec le chiffre de la population qu'une province possédant une Ecole dentaire, comme le cas est illustré par la province de Saskatchewan.

Il fait plaisir de remarquer que le nombre de dentistes, qui ont suivi des cours post-scolaires a augmenté durant ces dernières années. (Tableau No 6) Comme complément aux renseignements donnés dans le Tableau No 6, il y a 6 diplômés, qui suivent des cours en Hygiène Dentaire Publique (D.D.P.H.), cette année. L'organisation de cours pour des hygiénistes dentaires reste indéfini.

Un autre tableau (No 7) a été ajouté, cette année; cette compilation donne le nombre d'étudiants inscrits dans les Ecoles dentaires américaines. Comme on le remarquera, seulement deux de ces Ecoles donnent un nombre supérieur à trois. Ces étudiants sont presque tous de la Colombie-Britannique. Si on tient compte des étudiants inscrits dans les Ecoles américaines, le grand total des étudiants canadiens en Chirurgie Dentaire est de 1086.

Terre-Neuve	1 par	47,100
Ile-du-Prince-Edouard	1 "	13,300
Nouvelle-Ecosse	1 "	18,700
Nouveau-Brunswick	1 "	21,000
Québec	1 "	15,400
Ontario	1 "	10,700

TABLEAU NO 1

Enrégistrement total des étudiants dans les Ecoles Dentaires du Canada, au 3 janvier 1950

Université	1 ^{ière}	2 ^{ième}	3 ^{ième}	4 ^{ième}	Hommes	Femmes	Total
Dalhousie...	12	12	12	12	46	2	48
McGill.....	35	35	41	36	145	2	147
Montréal....	60	47	63	55	225	0	225
Toronto.....	76	80	152	170	472	6	478
Alberta.....	35	26	25	50	135	1	136
Totaux....	218	200	293	323	1023	11	1034

TABLEAU NO 2

Maximum d'étudiants pouvant être inscrits dans des classes régulières, dans les différentes Universités

Université Dalhousie.....	12
Université McGill.....	35
Université de Montréal.....	60
Université de Toronto.....	61
Université d'Alberta.....	35
Total.....	203

TABLEAU NO 3

Récapitulation de l'enrégistrement des étudiants dans les Ecoles Dentaires du Canada—1940-1949 inclusivement

Ecole	1940-1941	1941-1942	1942-1943	1943-1944	1944-1945	1945-1946	1946-1947	1947-1948	1948-1949	1949-1950
Dalhousie.....	31	25	25	22	28	27	38	37	41	48
Montréal.....	104	118	139	154	162	184	188	208	224	225
McGill.....	58	61	67	67	51	73	111	127	146	147
Toronto.....	210	232	270	255	264	180	340	435	478	478
Alberta.....	51	49	53	24	34	54	108	115	123	136
Totaux.....	454	485	554	522	539	518	785	922	1012	1034

TABLEAU NO 4

Total des diplômés durant les années 1940-1949 inclusivement

Ecole	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
Dalhousie.....	12	7	8	11	6	8	0	10	9	6
McGill.....	13	18	9	26	12	13	5	18	15	34
Montréal.....	23	14	34	18	37	30	41	36	38	45
Toronto.....	56	45	40	103	61	58	56	75	24	75
Alberta.....	13	13	32	8	24	7	0	10	13	20
Totaux.....	117	97	120	166	140	116	102	149	99	180

Pour l'année 1949

	Hommes	Femmes
Université Dalhousie.....	6	0
Université McGill.....	24	0
Université de Montréal.....	44	1
Université de Toronto.....	74	1
Université d'Alberta.....	20	0
	168	2

TABLEAU NO 5

Provenance des étudiants réguliers dans les Ecoles dentaires du Canada,
par provinces et pays étrangers, au 3 janvier 1950

Ecole	I. du P.-E.	N.-Ecosse	N.-Brunswick	Québec	Ontario	Manitoba	Sask.	Alberta	C.-B.	T.-Neuve	Etats-Unis	Indes Occ.	Guinée	Bermudes	Haiti	Europe	Chine	Inconnu	Totaux
Dalhousie...	3	27	10	1	0	0	0	1	0	4	0	0	0	0	0	0	0	2	48
McGill.....	3	3	2	61	13	6	17	4	19	3	9	5	1	1	0	0	0	0	147
Montréal....	1	2	11	184	7	1	2	0	0	0	11	0	0	0	2	4	0	0	225
Toronto.....	0	1	1	1	381	26	34	7	24	0	0	0	0	0	0	1	2	0	478
Alberta.....	0	1	0	0	1	4	33	79	18	0	0	0	0	0	0	0	0	0	136
Totaux....	7	34	24	247	402	37	86	91	61	7	20	5	1	1	2	5	2	2	1034

TABLEAU NO 6

Etudiants additionnels

	Dalhousie	McGill	Montréal	Toronto	Alberta	Totaux
† Dentistes durant 1949.....	0	0	0	15	0	15
‡ Dentistes durant 1949.....	0	0	122	84	0	206
Hygiénistes dentaires.....	0	0	0	25	0	25
Songe-t-on à organiser un cours pour les hygiénistes dentaires?.....	en décision	oui ?	oui, aussitôt que l'argent sera disponible	oui, incertain	pas de réponse	

† Cours menant à un diplôme.

‡ Cours ne menant pas à un diplôme.

TABLEAU NO 7

Nombre d'étudiants canadiens inscrits dans les Ecoles dentaires américaines au 15 octobre 1949

Southern California.....	1
Loyola-Chicago.....	3
Harvard.....	1
Tufts.....	1
Detroit.....	3
Oregon.....	33
Wash.-Seattle.....	10
Total.....	52



CONGRES ANNUEL DE L'ASSOCIATION DENTAIRE CANADIENNE**en collaboration avec****L'ASSOCIATION DENTAIRE D'ONTARIO****Dates:** 14, 15, 16, 17 mai 1950**Endroit:** Toronto, à l'Hôtel Royal York**Programme général:****Concert**

dimanche soir, le 14 mai—présenté dans le Concert Hall de l'Hôtel

Conférenciers:

lundi, mardi, mercredi, les 15, 16, 17—

DR LEONARD S. FOSDICK, CHICAGO

DR JOHN R. THOMFSON, CHICAGO

DR HERMAN BECKS, SAN FRANCISCO

Cliniciens

DRS DOUGLAS RICHARDSON—ROBERT MOYERS

J. ARTHUR RENAUD—A. GERALD RACEY—EDWARD BILKEY—H. M. WORTH

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M. JOHN FISHER

Sujet: "Soixante-quinze ans d'éducation dentaire au Canada."

DR HARVEY REID

Sujet: "La question d'assurance-santé, telle quelle se présente aujourd'hui."

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—Danse du président.

—Exhibits.

—Programme pour les dames

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The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, APRIL, 1950

No. 4

GENERAL ANAESTHESIA IN THE DENTAL OFFICE*

by C. R. STEPHEN, M.D., C.M. and H. M. SLATER, M.D.

THAT anaesthesia is today considered both a science and an art is due in no small part to the stimulus engendered in years past by certain members of the dental profession. Horace Wells is now a name which is well entrenched in the hallways of history. No less important is William Thomas Morton, who demonstrated to the medical profession at large the anaesthetic potency of ether. Perhaps less widely known is the fact that a dentist named Heidbrink in 1915 introduced the first gas anaesthesia apparatus which could be used successfully in the dental office.¹ Today the Heidbrink gas machine is the commonest one to be found in hospitals throughout the length and breadth of North America. As anaesthetists, we are thankful for your contributions, and hopeful that in the future the dental profession will continue to aid the specialty of anaesthesia.

The provision of safe and satisfactory general anaesthesia in the dental chair presents a complexity of problems which are not all of easy solution. Frequently the attitude of the patient is that he comes to the dental office expecting that the anaesthetic will interfere with his daily routine scarcely more than an afternoon nap. He fails to realize that, apart from the surgery involved, it will be necessary for him to be administered drugs which are

basically toxic, and which interfere to a greater or lesser degree with his normal physiological functions.

The requirements demanded by the dentist are not fulfilled simply. Primarily, of course, he wants a patient who will walk, and not be carried out of his office feet first. Moreover, he wishes a patient who will walk out within minutes of the time the surgery is completed. He desires a rapidly induced, profound anaesthesia, administered in such a way that he still has full access to the mouth.

Taking cognizance of such desiderata the problems of the anaesthetist probably resolve themselves into three broad categories. First, he must be concerned with the safety of the patient. The technique employed, and the agents used, should disturb as little as possible the normal physiological mechanisms of the patient. Particularly, he must assure himself that at all times the patient is receiving sufficient oxygen, for most patients who suffer mental changes or die in the dental chair do so because of severe anoxia. Lack of oxygen may result from not enough being given, or from some obstruction to the air passages. Blockage of the airway is prone to arise because the dentist and the anaesthetist are both interested in the same anatomical area of the patient, but have different

* From the Department of Anaesthesia, McGill University and the Children's Memorial Hospital, Montreal.

Presented at the 25th Annual Fall Clinic of the Montreal Dental Club, 21st October, 1949.

objectives in mind. Pushing downward on the mandible, improper placement of mouth packs, poor positioning of the head in relationship to the trunk, and inadequate facilities for suctioning blood or debris, all may lead to mechanical obstruction of the airway. Avoidance of this type of complication is not difficult if there is mutual understanding of the situation.

Secondly, the transference of his activities from the operating room of a hospital to the dental office alters the perspective of the anaesthetist. The pre-operative preparation of the patient cannot always be complete, although usually some sedative in the form of a short-acting barbiturate can and should be given. Seconal or nembutal will diminish the apprehension of the patient and often ease the anaesthetist's task during both induction and maintenance. It is impractical to give hypodermic injections of drying agents, such as atropin, to ambulatory patients, and so anaesthetic agents must be chosen which will not produce overabundant salivary secretions. Excess secretions are hazardous in that they may produce obstruction of the airway. In the hospital the anaesthetist need not worry if the patient slumbers for a time after the operation, but in the dental office the narcosis must be "short and sweet." One can extend the "sweet" part to imply that awakening should not only be rapid, but also devoid of nausea and retching. This again involves a careful selection of the agent to be employed. There are some cases done in the dental office which, if they were hospitalized, would be anaesthetized with an endotracheal technique to assure an adequate airway at all times and to avoid aspiration of blood. As a protection to everyone concerned, the anaesthetist should carry to the dental office an endotracheal tube and a laryngoscope so that he will not be deprived of such life-saving facilities should an acute emergency develop. Finally, complete satisfaction is not achieved unless good suction is available in the dental office. A powerful

water-suction should be a part of the anaesthetist's equipment.

The third problem of the anaesthetist is to co-operate suitably with the dentist to provide optimum surgical conditions. The patient should have sufficient narcosis and analgesia so that he will stay in the chair and not be a moving target for the dentist. His posture should be such that the dentist can do his work without inconvenience. Inasmuch as most of his extractions and fillings are done with the patient sitting up, he usually prefers this position when the patient is asleep. However, this is an unusual posture for the anaesthetist, and does add to his problems of maintaining a clear and unobstructed airway, and an even level of anaesthesia. A compromise solution is to have the entire chair tilted backward so that the back of the patient is tending to be horizontal with the floor.

One can see from the foregoing that actually the anaesthetist is under certain handicaps when narcotizing patients in the dental chair. A dental anaesthetic in the office is a difficult procedure which at times may tax to the utmost the ingenuity of the anaesthetist. However, it can be relegated to a safe procedure if one practises the following dictum attributed to John H. Zeckler, of Buffalo: "One might say about anaesthesia as about most other things in life—if you know the trouble you might get into and are prepared to get out of it, you usually don't get into it."²

INDICATIONS

What are the indications for general anaesthesia in the dental office? There is no hard and fast answer to this question, and indeed, with the skill which the dental profession has developed in regional analgesia, the indications are becoming fewer. One anaesthetist has gone so far as to say that general anaesthesia, with its many complications, should not be administered in the office.³ With this statement we do not agree. It is our opinion that it is safe for a qualified anaesthetist to give general anaesthesia in the dental chair,

providing the dentist has some basic knowledge of the difficulties involved and is willing to lend his assistance if required. There are very apprehensive patients who demand to be asleep, and there are children whose co-operation it is impossible to obtain. Surgical emergencies may arise where local or regional analgesia is not feasible. Such cases as these lend themselves well to general anaesthesia. Then the question arises as to how much can be done safely in the office, or when should the patient be admitted to hospital for surgery. The decision here is very arbitrary, and depends on the confidence which the dentist has in the anaesthetist, and vice versa. It also depends to some extent on the economic status of the patient. From our point of view, if the dentist feels he is to require more than fifteen minutes of narcosis, it is imperative that the adult be hospitalized. This is a questionable time limit, it is realized, but an anaesthesia longer than this can be administered safely only if the airway is rendered mechanically patent by the presence of an endotracheal tube. This requires techniques and facilities which are not easily performed and available in the dental chair. With children the situation is somewhat different, as will be explained in detail later. Patients who are suffering from chronic respiratory or cardiovascular diseases should be assessed carefully on an individual basis, with consultation between the dentist, the anaesthetist and the patient's doctor.

AGENTS

It is fitting to review at this time the various agents which are being employed in dental offices throughout the country. Whatever the agents used, the anaesthetist should have an anaesthetic machine on hand even for the shortest case, so that he has an adequate supply of oxygen available. He should also have good suction ready for use and an endotracheal tube and laryngoscope set out for emergency purposes.

Nitrous oxide has been the agent most frequently employed for the dental patient throughout the past hundred years. It is an extremely innocuous agent, providing a pleasant, rapid induction and in most cases a similar type of recovery. Administration is usually by means of a nasal mask. Fortunately the unconscious patient almost invariably breathes through his nose and not through his mouth.⁴ Utilization of some positive pressure in the system is often of benefit as it aids in transmitting the gases to the alveolar surfaces of the lung.⁵ This gas disturbs the metabolism of the body far less than any other anaesthetic known. However, it is a weak agent, and being such often will not supply sufficient analgesia unless the oxygen in the inhaled atmosphere is reduced considerably. In other words anaesthesia is being produced partly by nitrous oxide and partly by lack of oxygen. This is an unphysiological state of affairs, and one which is being recognized gradually as being incompatible with good and safe anaesthesia.^{6,7} Lack of oxygen can be tolerated for short periods, but the point at which permanent central nervous system damage becomes established is unknown and indeed may vary from patient to patient. Most of the deaths occurring in the dental chair are from an intolerable degree of anoxia. It is now being taught in schools of anaesthesia that nitrous oxide should never be given with less than 20 per cent oxygen, or that amount which is found in the atmosphere. But the agent is not potent enough in this dilution to furnish satisfactory analgesia, so if nitrous oxide is used it must be supplemented with other more potent drugs. Several of these have been utilized, including chloroform, ethyl chloride, ether, vinylene, pentothal, cyclopropane and trichlorethylene.

Chloroform and ethyl chloride are both extremely toxic agents which may produce respiratory and cardiac arrest with only several inhalations. Their employment in the dental office is not recommended. Ethyl chloride is still

sprayed on a mask frequently to produce a short narcosis sufficient to extract one or two teeth in children. Even such short administrations are not without the danger of producing cardiac standstill, and one should not succumb to the convenience afforded by this agent.

Ethyl ether is a safe anaesthetic agent, but not suitable for the dental office. Even when used in small quantities as an adjunct to nitrous oxide, the induction is slow and the irritation of the vapour induces abundant salivary secretions which demand the use of atropine beforehand. Moreover, recovery may be prolonged, and is accompanied by nausea and vomiting in about 60 per cent of patients.

Vinyl ether, or Vinethene, is a potent drug, but of considerable value for short procedures⁸. If dropped and vapourized on a mask, unconsciousness is produced in a child after three good breaths, and after several more breaths the mask may be placed over the nose. The dental surgeon then has two or three minutes in which to work. Awakening is rapid and usually without nausea. Vinethene may increase secretions, but these are seldom copious enough to be troublesome. Occasionally a child may develop mild convulsions with this agent, but these are easily controlled by removing the mask and by giving oxygen from the gas machine. Many anaesthetists have employed this drug to reinforce the action of nitrous oxide⁹, and as such it has proven of value. To one of the gas machines may be attached a special bottle for this purpose. Usually only small amounts of vinethene are required to produce the desired narcosis.

After the introduction of pentothal sodium in 1934 by Lundy, it was felt by many that this ultra-short-acting barbiturate, which could be given so simply by vein, was going to solve many of the problems of anaesthesia. Unfortunately it was found to have definite limitations, which make its employment under some circumstances rather hazardous. Its use in dental

anaesthesia has been recommended by several authors,^{10, 11, 12} but more recently its popularity has waned. The disadvantages relevant to dental work^{13, 14} include:

1. the ease of administration. The untrained may be led to use it carelessly and without thought as to the consequences.
2. it is a potent depressant of the respiratory centre. In some patients relatively small doses may result in apnoea or very shallow respirations.
3. the tendency to laryngospasm is increased by pentothal. This is dangerous in any operation where secretions or blood are liable to initiate a laryngeal spasm.
4. barbiturates are primarily hypnotics and not analgesics. To achieve analgesia with pentothal alone, relatively large and depressant doses must be given.
5. recovery time may be prolonged beyond that of other agents. The larger the dosage, the longer it takes the patient to awaken.

Because of these several objections to its use, pentothal is now seldom employed as a single agent. Like other drugs it is recommended as a supplement to nitrous oxide and oxygen. Usually an amount just sufficient to cause unconsciousness is injected intravenously, and then the anaesthetist proceeds with nitrous oxide. In this way sufficient oxygen can be used and the amount of pentothal is so limited that the time of awakening is short. Special precautions must be taken to ensure that the airway is kept patent and that blood and debris do not slip past the mouth packs to irritate the larynx.

The employment of cyclopropane in dental surgery for the ambulatory patient has been championed particularly in England.¹⁵ This is a potent inhalation agent which provides both a pleasant, quick induction and a rapid recovery. Because of its strength abundant amounts of oxygen can be given with it. Two important drawbacks detract from its routine admin-

istration in the office. The first is that it is a highly explosive agent. The presence of any static spark or flame may set off a detonation which results in catastrophe for the patient. The second deterrent to its use is the fact that it sensitizes the heart to the presence of adrenalin. Thus, if this vasoconstrictor is applied locally by the dentist, there is danger of initiating serious cardiac irregularities.

In recent years our attention has been directed to the employment of trichlorethylene in the dental office as a supplement to nitrous oxide and oxygen. This interesting agent was first introduced to anaesthetists in England by Langton Hewer in 1941.¹⁸ Prior to this it was used in clinical medicine as an inhalant to produce pain relief without loss of consciousness in trigeminal neuralgia. It is an extremely potent drug, and one which possesses tremendous analgesic powers. When used in the small quantities which are required to reinforce nitrous oxide, it enables one to provide good operating conditions without depriving the patient of his necessary oxygen and without increasing the postoperative recovery time. Trilene, as it is called, does not increase salivary secretions and is neither inflammable nor explosive.

During the last year and a half we have employed this particular combination of agents in approximately 730 children and adults for short dental procedures. Our experiences have been similar to those found by others.^{17, 18, 19} There have been no complications during or after anaesthesia which have given cause for alarm. There is little doubt but the patients are in better condition following this combination than they are when the procedure is attempted with nitrous oxide as the only analgesic agent. The method followed is somewhat along the following lines. With children a conversation is struck up while a face-mask with pure nitrous oxide running from it is held a little distance above their face. This conversation must be continuous in order to hold their atten-

tion, and concerning topics in which they are interested, such as schools, bicycles, dolls, trains, books, and so on. Because the nitrous oxide is odourless, and also because it is one and a half times as heavy as air, the children breathe it in without realizing that they are gradually going to sleep. The mask is gradually lowered towards the face and the child is usually asleep by the time the mask is fully on the face. In order to avoid anoxia, oxygen is turned into the circuit the moment the mask is completely on the face. At the same time trichlorethylene is turned on and gradually increased until the desired level of analgesia is obtained. At this point the face-mask is removed, a nasal mask quickly substituted, and the patient is ready for the dentist. This type of induction is smooth and as a rule does not take longer than three minutes. In most cases one is able to avoid terrorizing the child in spite of the fact he has little or no premedication. The trichlorethylene is not introduced until the patient is asleep because it has a sweet odour which renders some children apprehensive. In adults the anaesthesia is induced entirely by the nasal route employing the nasal mask. The procedure is similar to that just described, the trichlorethylene not being introduced until the patient is asleep. The mouth gag may or may not be inserted between the clenched teeth before anaesthesia is commenced.

After induction is completed the mouth is opened, and the packs placed in position. They must be so situated that blood and debris is prevented from running down to the back of the throat, while at the same time there is no encroachment on the vital airway of the patient. Anaesthesia is maintained with never less than 20 per cent oxygen in the inhaled gases. The potency of trilene is such that less than 1 per cent is required to provide excellent reinforcement for the nitrous oxide analgesia. It can be turned off completely about two minutes before surgery is completed. As a rule the patient recovers quickly

and is able to leave the dental chair within three minutes of the time the operation is over. He can leave the office within five to fifteen minutes later. Undesirable sequelae are few. The occasional case may vomit, and from time to time there may be a complaint of headache for thirty minutes to one hour.

Experience has led us to employ this technique and type of anaesthesia for short dental cases in preference to the other types described. It is felt that the combination of nitrous oxide and trichlorethylene, with abundant oxygen, is safe for the patient, and disturbs but little of his normal physiological functions. With these agents it is believed that suitable conditions can be provided for the surgeon without sacrificing the precautions essential for good anaesthesia.

PROLONGED ANAESTHESIA FOR CHILDREN

The child who comes to the dental office with fear, apprehension and terror written all over his face is a very difficult problem for the dentist. Unless he is treated with care and understanding, he may be a future candidate for the psychiatrist. Often the best cajolery of the dentist falls on deaf ears, and he finds on his hands a patient who requires several sessions of work, but whom he cannot even entice into the chair. Several years ago this problem was presented to Dr. Digby Leigh, formerly Director of Anaesthesia at the Children's Memorial Hospital in Montreal. The order was a large one. How could these recalcitrant patients be safely anaesthetized in the dental office for one to one and a half hours so that necessary fillings and extractions could all be performed at one sitting? Could a combination of agents be employed in such a way that the child would awaken quickly and be able to return to his home without ill effects and without requiring special nursing care? As far as could be learned, there was no description in the literature of such an anaesthetic technique for the dental office. Karp and Teusch-

er, from Chicago, in 1947²⁰ described a method to be employed for hospitalized children. Their technique was not practical for the office because the children slept four to six hours following completion of the procedure. Moreover, the explosive combination of ether and oxygen was utilized, and it was felt dangerous to use the drill under such circumstances because of the possibility of creating sparks at the tooth surfaces. Thus the type of dental interference was limited in scope.

Shortly before he left Montreal, Dr. Leigh devised a technique which we at the Children's Memorial Hospital have been able to carry on into practice both in the hospital and in the dental office. To date we have anaesthetized successfully 110 children varying between 2½ and 16 years of age for periods ranging from 40 minutes to 2 hours. Some of these have been done in the out-patient department of the hospital and some in dental offices. None have been admitted to hospital, and all have been able to go home within 30 minutes of the termination of the operation. There have been no known harmful sequelae in this series. Within two to three hours following the anaesthesia the patients have been able to retain food and fluids.

The only piece of extra equipment which the dentist requires for such cases is a rectangular board, which can be strapped over the flattened dental chair. It is felt necessary to simulate an operating room table in the dental office so that the anaesthetist may have complete control of the movement of the head on the trunk during the procedure. About one hour before operation the parents give the child a prescribed dose of nembutal or codeine and aspirin. Pre-medication is of value in rendering the child quiet and co-operative. On arrival at the office, the patient climbs up on the table and then, as for short cases, is lulled off to sleep with nitrous oxide while engaged in conversation with the anaesthetist. At times we see the obstreperous child who will not

listen to anything. In these cases the mask is placed firmly on the face, and silence descends with unconsciousness after three good breaths of nitrous oxide. Once the patient is asleep, one of the arms is strapped to a board, and a mixture of pentothal and curare injected intravenously. These drugs induce a rapid hypnosis associated with muscular relaxation. The amount injected depends on the age and size of the child, but an average dose for a six-year-old is 250 mgm. of pentothal along with 30 units of curare. Immediately this dose is injected, the anaesthetist begins to assist the patient's respirations by pressing on the re-breathing bag during inspiration. The gaseous mixture is altered so that at least 50 per cent oxygen is given. After no longer than two minutes, when the jaw is completely relaxed, an endotracheal tube is passed through the nose into the trachea, under direct vision, with the aid of a laryngoscope. Due to the combined action of pentothal and curare, spontaneous respirations may have ceased by this time; but this is not worrisome as there now is in place a mechanically patent airway through which one can inflate the lungs at will. The endotracheal tube is connected to the anaesthetic gas machine and between the two is placed a reservoir bag and a blow-off valve. Nitrous oxide and oxygen are flowed from the machine in a ratio of 4:1 so that the patient is always receiving 20 per cent oxygen in the gas mixture he is breathing. At this point the dentist inserts his gag and pack, and proceeds with his work. Respirations are controlled or assisted continually, that is to say, the anaesthetist does most if not all of the breathing for the patient. In this way abundant oxygen is supplied to the blood, and the carbon dioxide is eliminated properly through the blow-off valve. The needle and syringe containing the pentothal and curare are left in situ in the vein so that more may be given if indicated.

The anaesthesia is maintained by continuing controlled or assisted respirations with 80 per cent nitrous oxide

and 20 per cent oxygen. We know that nitrous oxide disturbs the normal functions of the body less than any other agent, providing adequate oxygen is supplied. This we endeavour to do at all times. The relaxant effect of the curare passes off in 30 to 40 minutes. The hypnotic effect of the pentothal is largely dissipated after 45 minutes to 1 hour. Therefore after one hour the anaesthesia is being sustained principally by the nitrous oxide. If surgery is terminated about this time, spontaneous respirations begin without difficulty, if not already present. After the mouth and pharynx have been cleared thoroughly of debris, the child is turned on his side with his head somewhat lower than the rest of the body. By this time the patient is usually beginning to move about and the endotracheal tube is withdrawn. Within five minutes the child is reacting vigorously to stimuli, opening his eyes, and answering questions. If the dental procedure lasts longer than one hour, it may be necessary to inject further small amounts of pentothal and curare. However, the quantities required are so tiny that they do not interfere with the awakening of the patient. If only a few minutes more anaesthesia is required, and the child shows signs of awakening, the nitrous oxide and oxygen may be supplemented with a little trichlorethylene.

The dentist finds working conditions quite satisfactory with this technique of anaesthesia. The jaw is well relaxed and the equipment of the anaesthetist does not impinge on his field of operation, or interfere with his various movements about the head of the patient. The presence of the endotracheal tube will prevent the possibility of aspiration of blood or tooth fragments during operation. There is no explosive hazard involved, so that there need be no limitation to the type of work done. These agents do not stimulate salivary secretions and several dentists have remarked on the dryness of the mouth. Perhaps the biggest advantage is that in one relatively short session the dentist is able

to complete all the necessary dental therapy which in a difficult child might only be done after hours of "blood, sweat and tears".

As dentists you may criticize this technique for prolonged dental anaesthesia in the office as being too radical, too dangerous, and impractical. As anaesthetists we would reply that, although this procedure may be a little novel, yet there is nothing radical about it. The principle of employing small amounts of several agents to produce a balanced anaesthesia is one which is recognized as upsetting the physiological functions of the patient to only a minor degree. The basic agent, nitrous oxide, is one of the safest drugs available for anaesthesia when used in its proper manner. We are convinced that this is not a dangerous technique when carried out by doctors who are qualified anaesthetists. There is no doubt that considerable responsibility is placed on the anaesthetist, but this is no more than he is asked to assume in his day to day practice. The presence of an endotracheal tube is insurance against potential and serious complications. The method is not an impractical one. The dentist needs to acquire one board to act as an operating table, and the necessary extra equipment required by the anaesthetist can be carried conveniently in one small bag.

SUMMARY

1. The problems presented to the anaesthetist by the patient requiring general anaesthesia in the dental chair are outlined.

2. Avoidance of oxygen lack in the patient under all types of anaesthesia is stressed.
3. Selection of anaesthetic agents and techniques is discussed.
4. The advantages of nitrous oxide and oxygen, supplemented by trichlorethylene, are presented.
5. A technique for prolonged dental anaesthesia in children is described, utilizing pentothal, curare, nitrous oxide and oxygen.

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It is an interesting fact that public and financial support is not related to the size and importance of the health problem. For example, voluntary agencies collect sixteen and a half million dollars for infantile paralysis which represents \$94.00 per case, fifteen million dollars for tuberculosis or \$22.00 per case, four million dollars for cancer or \$8.00 per case, thirty thousand dollars for diabetes or 5 cents per case and one hundred thousand dollars for heart disease or 3 cents per case. From the mortality standpoint, heart disease is America's number one health problem.—N.W. Dent. Jan. 1950.

Wrinkles should merely indicate where smiles have been.—Mark Twain

THE REPLACEMENT OF THE MANDIBULAR FIRST MOLAR

by J. D. PURVES, D.D.S., Toronto, Ontario

THE role of the first molar in the dental arch has long been a topic of paramount importance in dentistry. These teeth maintain the normal relation of the jaws for six vital years of the childhood dentition. Their interrelation forms the basis of classification of occlusion. It thus becomes evident that any premature loss of the mandibular 1st molar can only bring about the crippling sequelae which daily are observed in clinical practice. Fig. 1. Among these may be listed:

1. Drifting and tipping of 2nd and 3rd molars.
2. Exfoliation of the opposing tooth or teeth.
3. Open contacts in both arches, predisposing to
 - (a) Caries
 - (b) Periodontal pocket formation
4. Traumatogenic occlusion
5. Septal degeneration
6. Gingival recession



FIG. 1

GENERAL CONSIDERATIONS

Some general trends relative to the dental organ deserve consideration. The normal dental adjustment to any loss of a tooth is a mesial drift of all teeth, observed clinically through

wearing of the contacts by a process of aging. Thus if any tooth be lost nature's plan to close the space goes on more rapidly. By means of exfoliation nature further endeavours to close the gap.

At times, the contact point between the mandibular bicuspid tends to open. This can only be attributed to the action of fibrous food on the contacts plus the action of the opposing inclined planes. Gingival recession at the distal of the 2nd bicuspid can be noticed on most of these teeth, indicating a degree of overstress. A mesial drift accompanied by a tipping action of mandibular 2nd and 3rd molars, also becomes evident. The degree of tipping varies according to:

1. The time element.
2. The root characteristics and development.
3. The susceptibility of the alveolar process to periodontal embarrassment.
4. The cusp relationship with the maxillary arch.
5. The degree of cusp wear.
6. The type and character of the maxillary teeth.

PERIODONTAL SIGNIFICANCE

One of the most significant aetiological factors in periodontal pocket formation is the drifting and tipping of teeth. The periodontal degenerative process includes:

1. Traumatogenic occlusion.
2. Impaction of fibrous foods beneath contacts.
3. Stasis and hence lowered resistance of periodontal capillaries and lymphatics.
4. Secondary infections due to bacterial invasion.
5. Increased tendency to calculus formation.
6. Gingival recession.

Again the exfoliation of the maxillary 1st molar presents a periodontal problem. Rather than perpetuate the irregularity of this tooth by means of building "a crooked bridge to occlude with a crooked tooth," the periodontal prognosis may be greatly enhanced, by radical grinding of the upper tooth to a condition approximating normal. Thus working and balancing bites on the lower pontic may be more accurately obtained.

Traumatogenic occlusion is probably the largest single factor in the breakdown and loss of abutment teeth. Prior to abutment preparation, it is desirable to reduce any evidence of overstress by discreet occlusal correction. The use of hard golds in fixed prostheses, which offer greater resistance to wear than natural teeth makes it necessary to adjust the occlusion carefully, and at subsequent intervals observe any approach of traumatic factors.

Those clinical cases of the periodontitis complex type, which present a horizontal degeneration of all oral septa, deserve special mention. Occurring usually in young adult patients, they often present with a missing mandibular 1st molar. There is no other type of case which responds better to fixation by a fixed prosthesis than this type.

The added weight of a pontic soldered rigidly to two abutments, brings added stresses to the periodontal structures of both abutments. Stresses on the prosthesis are not only vertical but also tangential. The success of any attachment depends upon a state of equilibrium existing between the forces tending to compress and the ability of the periodontium to withstand these forces. Here lies the crux of the two phases of operative dentistry—the union of the mechanical and biological. Over-compression produces capillary and lymphatic stasis and hence a lowered tissue resistance.

The loss of the 1st molar contributes to a phase of oral breakdown known as the "adopted centric." So often the mal-relationship of cusps and inclined

planes, forces the inter-maxillary relations into a more comfortable centric—the adopted centric. These changes must be compensated for, not only by every tooth in the dental arch but by condylar pad changes.

PHYSICAL FACTORS

A few factors involving the physical nature of stresses and strains aid the dentist in the construction of a fixed partial prosthesis. Generally a bridge is similar to a simple beam construction in being supported by

- (a) A 2nd bicuspid—a single rooted tooth
 - (b) A 2nd molar—a two rooted tooth
 - (c) A pontic attached to (a) & (b)
- The forces from the maxillary arch may be
- (a) A portion of the 1st bicuspid
 - (b) The 2nd bicuspid
 - (c) The 1st & 2nd molars
- or
- (1) A fixed partial prosthesis
 - (2) A removable or complete prosthesis

Any beam in action is subject to moments of force, which are in equilibrium when the moments clockwise = the moments counter clockwise. Each moment is a product of the amount of force $\times$ the distance from the end of the beam from which the forces are applied.

In dentistry our supports or abutments derive forces which are applied:

- (1) Vertically.
- (2) Horizontally and those, which due to the inclined planes of the teeth are applied at a tangent.
- (3) At varying degrees of distance from either abutment.

The abutment teeth may also have their axes in varied directions as illustrated in figure 2. To compensate for these varied stresses and irregular abutment teeth, we endeavour to construct our appliances, so that the stresses are applied through the long axes of the abutment teeth, that is, optimum contact along the path of the beam and balanced in working

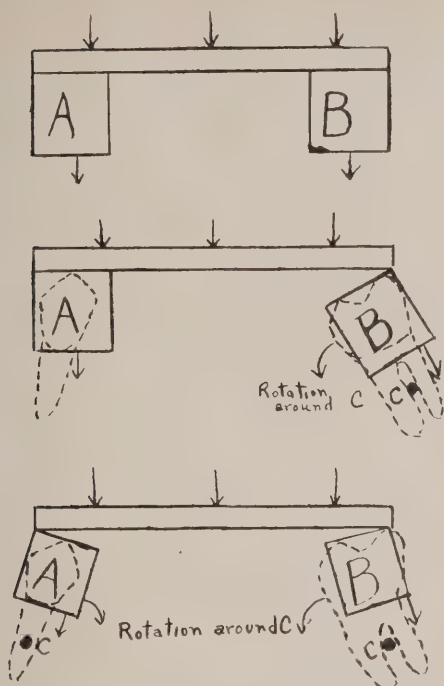


FIG. 2

bites. Excessive force on one abutment produces moments of force which ultimately disclose themselves in the form of recessions, mobility or loosening of an abutment.

Clinically, it is desirable in the case of badly tipped or rotated teeth to move these teeth to a normal position by means of an orthodontic appliance. The bridge then serves as a permanent retainer in addition to replacing the lost member. Badly tipped teeth which exceed 24° of a centrigrade circle should never be used as abutments, unless it is possible to tip the tooth to a nearer normal position.

CHOICE OF ABUTMENT TEETH

The choice of a tooth to serve as an abutment can only be the result of the dentist's appreciation of the factors aforementioned, plus his own experience. To these may be blended a profound biological appreciation of the tooth in the dental arch. The following factors may be tabulated in considering the choice of an abutment:

1. Oral hygiene.
2. The root area of the adjacent teeth determined by means of roentgenograms.
3. The periodontal condition of the teeth.
4. The length and breadth of the crown and its relation to the root-length, supported by a normal periodontum.
5. The condition of the crown, as to caries and fillings present.
6. The vitality of the tooth or teeth.
7. Transillumination and percussion qualities.
8. Susceptibility of the mouth to caries, infection and calculus.
9. The colour and texture of the mucosa.
10. General systemic condition of the patient.
11. The occlusal relationship of the teeth.
12. Mobility.
13. Habits of the patient, viz. pipe-chewing.

In the greater majority of cases the 2nd bicuspid and the 2nd molar can adequately support a 1st molar replacement. However it sometimes becomes necessary to attach to the 1st bicuspid and occasionally the 3rd molar, soldering the contact points and thus, through a splinting action immobilizing a doubtful tooth.

Conical roots and fused 2nd molar roots are not too desirable unless loading in centric and working bites is reduced.

CHOICE OF AN ABUTMENT

Abutments are classified as extra-coronal or intra-coronal. Extra-coronal attachments include cast full and $\frac{3}{4}$ crowns and are considered to provide maximum retentive qualities. MOD's, crow's foot, half-veneer crowns and the two surface inlays are considered to be intra-coronal. Retention is again enhanced by the accuracy of the parallelism and casting technique.

The mandibular 1st molar receives as great or greater loading than any other tooth in the dental arch. To this end then, one must critically examine

the case for the maximum retention, aesthetics and structural characteristics obtainable on the abutment of choice. The fillings present in the teeth, susceptibility to caries and periodontal conditions are further considerations. The partial veneer crown is a desirable attachment in those cases where the distal surface of the 2nd molar is not involved by a filling or caries and when the 3rd molar is missing. The most common abutments in this bridge are $\frac{3}{4}$ crowns on both abutment teeth. Simple DO and Mo inlays do not provide sufficient retention or stability and are bound to premature failure. The MOD inlay, except in broad teeth with flattened cusp is best extended to the $\frac{3}{4}$ preparation.

Many cases of failure can be traced to a small, under extended abutment and with insufficient rigidity to hold its place in a functioning occlusion. In those cases where a gingival cavity or restoration exists a stronger attachment may be gained by using full cast crown open-faced with acrylic or porcelain, if used on the 2nd bicuspid.

FIXED VS A SEMIFIXED PROSTHESIS

The science of periodontia is vitally linked with crown and bridge procedures. Thus the opinion voiced by this group is valued, when we consider the effect on the periodontium of a fixed or semi-fixed appliance. It is desirable periodontally to have the prosthesis rigidly fixed in the case of the mandibular 1st molar replacement. However in cases of tipping or in the case of excessively bell shaped teeth it becomes necessary to compromise on this problem and resort to an interlocked inlay on the bicuspid abutment. This is due to the fact that excessive cutting would be necessary in order to gain the parallelism necessary. In the case of the interlocked inlay, the term "interlocked" is stressed, since a simple occlusal rest is quite undesirable.

The periodontal therapeutic measure of rigidly splinting together teeth which are slightly mobile, further justifies the clinical results gained by these measures.

SELECTION OF A PONTIC

General factors to be considered in the construction of the 1st molar pontic may be stated as:

1. The reduction by $\frac{1}{3}$ of the buccolingual width of the pontic.
2. Full occlusal restoration of all inclined planes to function in all working bites.
3. The tissue contact portion of the pontic to be of porcelain.
4. The porcelain contact with the tissue should be slight in area and wedge shaped to allow for large embrasures. Fig. 3.
5. Tissue contact should in no way blanch the soft tissue.

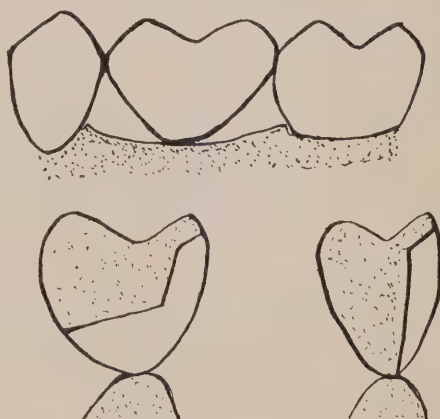


FIG. 3

The most common pontics used in replacing the 1st molar are:

1. Steele's Porcelain Trupontic
2. Steele's Porcelain Facing
3. All-acrylic reinforced pontic.

The Steele's Trupontic is applicable to the greater majority of 1st molar replacements. It provides an all porcelain tip in contact with the mucosa and is of sufficient bulk to be strong. It is further protected by an all gold occlusal surface.

The Steele's Facing is indicated in very short crowned pontics and is less desirable due to the shelf-like area, created under the gold occlusal surface. This tends to allow food impaction.

The all-acrylic pontic with a reinforced framework presents the ad-

vantages of aesthetics and adaptability. However due to the undesirable wear factor of the acrylics, and the difficulty of repair one must proceed cautiously in their use.

The so-called "sanitary bridge" is a dental misnomer. In the cleanest of mouths a gelatinous deposit is observed clinically on the tissue side of the pontic. Their use has been indicated in cases where excessive resorption of the alveolar ridge results. This type of replacement is best accomplished by the use of a Steele's Tru pontic with the porcelain set far enough off the tissue that the area may be cleansed by the cheek and tongue. Fig. 4.

The wide embrasures of the pontic cannot be too carefully stressed. These provide for:

1. The development of papillae of suitable tone.
2. Self cleansing areas, allowing no food impaction.
3. The gingival margins of the abutments are protected from recurrence of caries due to coverage by a healthy gingiva.
4. The normal passage of the bolus of food over these spillways provides a natural stimulation.
5. Allow for the use of additional cleansing aids such as interdental stimulators.

CONCLUSION

The prompt replacement of the mandibular 1st molar is one of the finest services the dentist can provide for the adult dentition. Although the mechanics of fixed partial design and construction have reached a high degree of accuracy, still there exists a broad biological aspect to be explored, before a closer approach to perfection can be attained in this field. Modern dentistry

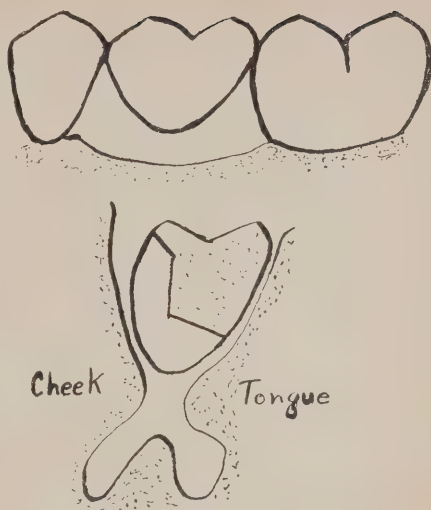


FIG. 4

must constantly keep these factors to the fore and through observation and conclusion strive to minimize those factors contributing to failure. Until this biological phase can keep pace with our mechanical achievements in fixed bridgework, we can at present strive to place prostheses providing abutments of sufficient size and rigidity to carry the stresses of mastication. Poor oral hygiene and an improper balance of occlusion still remain the greatest factors in our bridge failures.

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86 Bloor Street W.

*"There was once a Faith Healer of Deal,
Who said, 'Although pain isn't real,
If I sit on a pin,
And it punctures my skin,
I dislike what I fancy I feel'."*

ANNOUNCEMENTS

Dominion Dental Council

The written examination of the Dominion Dental Council will be held from May 22 to 27.

Maritime Dental Association

The Annual Convention of this Association under the auspices of The Nova Scotia Dental Association, will be held at Digby Pines Hotel, August 30 to September 2, Digby, N.S.

American Dental Society of Europe. Amsterdam, July 19-22.

F. Douglas Derrick, 140 Park Lane, London, W.1.

A.D.A. Convention

The 91st annual session of the American Dental Association will be held in Atlantic City, Oct. 30 - Nov. 2.

Annual Convention

American Association of Industrial Dentists

HOTEL SHERMAN, CHICAGO, ILLINOIS

April 25, 26, 27, 1950

The interest in Industrial Dentistry has been growing so rapidly, that the A.A.I.D. has decided to extend their annual meeting into a full three day program—April 25, 26, 27, 1950. There are to be papers, conferences and discussions about Dental Health Programs in Industry and presentations to be made by physicians and dentists in industry with a comprehensive industrial dental service. A Panel covering management and the part the industrial dentist and the industrial nurse play in carrying out this type of program will also be held, with each group being represented.

A tour of an industrial plant having a dental installation is scheduled.

All ethical dentists engaged in or interested in industrial dentistry are welcome.

Italian Congress on Stomatology

The 25th meeting of this Congress will be held at Stresa (Lake Maggiore) September 26-30, 1950. Canadian dentists will be welcome. For further information apply to Dott. Enrico Goia, via Lamarmora, 9, Torino, Italy.

Please Read First Paragraph of Editorial Entitled

"A WARNING AND A REQUEST TO ALL DENTISTS"



Courtesy of Travel & Publicity, Province of Ontario.

BLOSSOM TIME (NIAGARA)

A visit through the Niagara Peninsula during Blossom Week is suggested as an added attraction to the Convention Program. (See detail in program.)



SUNNYBROOK HOSPITAL

Your Convention plans should include a visit to Sunnybrook Hospital.

GENERAL INFORMATION

Ontario Dental Association Convention

REGISTRATION

Procedure for registration of members and guests is as follows:

1. Fill out an "Information Card at tables provided.
2. If fees are paid in advance, go to desk (paid-up members) and receive your envelope with badge, complimentary luncheon tickets, and program.
3. If your fees are not paid, take your "Information Card" to desk marked under alphabetical letter of your name where your fee is paid and you receive your badge, complimentary luncheon ticket, and program.
4. Dentists from outside Ontario will register at desk so marked.
5. Ladies will register at desk so marked. (Details of ladies' entertainment will be announced.)
6. Secure your Dinner Dance tickets at desk marked "tickets".
7. Members of 2T5 class who are celebrating their 25th anniversary of graduation should register at desk so marked.
8. The Registration Desk will be open Sunday afternoon, May 16th, 3.00 p.m. to 5.30 p.m.

Members of the staff stationed at the various entrances will invite you to display your badge. Your co-operation in our efforts to restrict Convention privileges to our members and registered guests will be appreciated.

Owing to stringent hotel regulations it is imperative to secure tickets for luncheons, reception and dance at time of registration.

Time of luncheon and Dinner Dance are as follows:

MONDAY, 12.15 NOON, LUNCHEON
(complimentary)

TUESDAY, 7.00 P.M., DINNER DANCE,
AND FLOOR SHOW

Tickets on sale at the "Tickets" desk.

WEDNESDAY, 12.15 NOON, LUNCHEON
(complimentary)

It is the wish of the committee that all sessions begin promptly at the specified hour. The time and place of all clinics will be indicated in the program in order to avoid confusion.

PLEASE FOLLOW THE SCHEDULE CAREFULLY

Your committee asks that as many as can conveniently do so take advantage of the Sunday afternoon registration period.

PARKING FACILITIES will be available at Bay and Fleet Streets; also at Yonge and Fleet Streets.

REGISTRATION COMMITTEE

Registration Form

PLACE—Royal York Hotel, Toronto.

Date—May 14-17, 1950.

Preliminary registration saves you time and confusion and allows you to pick up your envelope containing badge, luncheon tickets and program without delay.

The registration fee of \$15.00 includes two luncheons, admittance to all clinics, and Sunday Evening Musicale.

Make cheque payable to Canadian Dental Association and forward to 211 Huron St., Toronto, Canada.

Please return this form with your cheque:

NAME

Please print.

OFFICE ADDRESS

Class 1T2 Reunion

Members of this class will hold a reunion at the King Edward Hotel on Monday, May 15. Those who can attend please write Dr. L. E. V. Tanner, Secretary, at 143 Main Street, Toronto or telephone Grover 9871.

HOTEL ACCOMMODATION

MAKE ANY RESERVATIONS DIRECT WITH THE HOTEL.

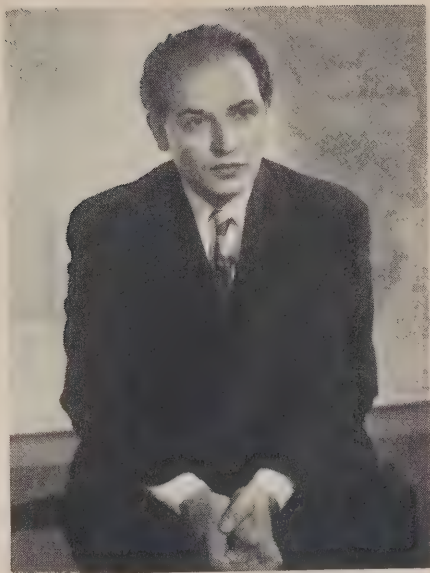
The Association will not be responsible for any Hotel Reservations.

MR. JOHN FISHER

well-known Canadian Commentator and
Lecturer "Reports" Seventy-five years of
Dental Education in Canada.

The program committee are pleased to
present Mr. John Fisher as

SPEAKER AT THE LUNCHEON
MONDAY, MAY 15th, 1950.



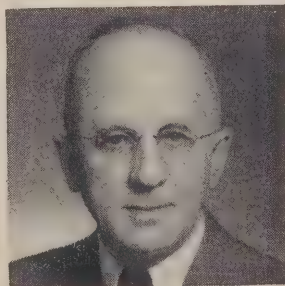
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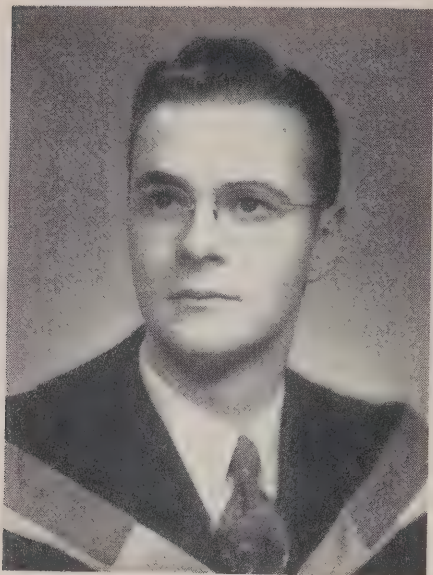
DR. W. SCOTT HAMILTON

Edmonton, Alta.
Dean, Faculty of Dentistry
University of Alberta

SUBJECT:

"Oral Surgery"





DR. ED. BILKEY

Toronto

Demonstrator, Dept. of Paedodontics
Faculty of Dentistry, U. of T.

SUBJECT:

"Space Maintenance"



DR. ROBERT E. MOYERS

Toronto

Professor of Orthodontics
Faculty of Dentistry, U. of T.

SUBJECT:

"Diagnostic and Prognostic
Procedure in Orthodontics for
The General Practitioner"



LT. COL. BAIRD



LT. COL. SHILLINGTON

MAJOR KEARNEY



★

LT. COLS.
BAIRD • SHILLINGTON
and MAJOR KEARNEY
Officers of the R.C.D.C. School,
Ottawa

Presentation Covers
Examination and Treatment
Planning recommended
by the R.C.D.C. School for use
of Clinic officers.

★



Courtesy—Office Provincial de Publicité, Service de Ciné-Photographie, Province of Québec.
The National Meeting of the Canadian Dental Association meeting in cooperation with the Ontario Dental Association are looking forward to the welcome of many delegates from Québec.



Courtesy—Travel & Publicity Bureau, Province of Manitoba.
The Hand of Greeting is extended to delegates from Manitoba attending the combined meeting of the Canadian Dental Association and the Ontario Dental Association.

The Forum

THE AIRDENT UNIT AND THE AIRBRASIVE TECHNIQUE

by WILLIAM R. MANN, D.D.S., M.S.

Condensed from Univ. of Mich. School of Dentistry Alumni Bulletin, Dec. 1949.

Some fifteen years ago, Dr. Robert B. Black, of Corpus Christi, Texas, felt that if some method of cutting teeth could be devised that would not upset the patient, more people would make regular visits to dental offices and would have cavities cared for while in stages of incipency.

Since Dr. Black possesses an engineering background, he immediately turned to the various industrial methods of cutting hard substances and studied them until he eliminated all but a gaseous-propelled abrasive. In 1942, he began developing a unit which was the forerunner of the present Airdent unit.

In 1945, the S. S. White Company began the research necessary to make this unit available to the dental profession in a form which could be easily used, free from mechanical difficulties. There was the problem of selection of a proper metal for the nozzle: eventually a sintered tungsten carbide was selected. There was the problem of selection of the best type of abrasive and of a compressed gas propellant which would cut fast enough and yet not so rapidly that it would be difficult to control during cavity preparation.

Since the act of cutting tooth tissue with the Airdent is quite different from that of cutting with burs and stones, it has been decided that postgraduate courses in airbrasive technique must be offered to dentists as the starting point in its introduction. In this the W. K. Kellogg Foundation Institute will be one of the various schools which will

offer airbrasive courses. Because the Airdent unit will not be in production until late in the summer of 1950, such courses will not be given until the Fall of 1950, when it will be possible for a dentist to purchase a unit immediately after completing his course.

The Airdent unit is a compact unit mounted upon casters and operates as an independent piece of equipment, needing only to be connected to an electrical outlet. The unit contains a source of carbon dioxide which, under 75 to 100 pounds of pressure, goes through a mixing chamber in which the abrasive (aluminum oxide) is introduced into the gaseous stream. The aluminum oxide particles range from 10 to 50 microns in size, with most of them about 30 microns.

The unit also contains a motor-blower assembly which creates the suction necessary to collect the abrasive and tooth debris from the field of operation. There is a suction hood, through which approximately 180 cubic feet of air are drawn per minute, and this hood is held near the corner of the patient's mouth throughout the preparation of a cavity.

There is also a handpiece connected to the unit by a small flexible tube. The handpiece is of a size and weight which feels comfortable in the hand and to it is attached a contra-angle and nozzle. The nozzle is made of a tungsten carbide and has a circular opening, .018 of an inch in diameter. Whenever the foot switch of the unit is pressed, the carbon dioxide propels the aluminum

oxide through the nozzle opening at a velocity of more than 1,000 feet per second.

A dentist is able to direct the cutting action by exerting lateral pressures or downward pressures, and he can taper cavity walls or undercut them by the manner in which his fingers manipulate the handpiece. Thus, much work of cutting may be done with excellent control even though the area being cut is not under close visual scrutiny every moment of the operation.

The cavity must also be kept perfectly dry in order for the abrasive to cut properly. This requires that a rubber dam be placed whenever the Airdent is used.

If the abrasive stream is accidentally directed at the soft tissues of the mouth, it will not disturb them. In the same manner, soft leathery dentine will not be removed by the abrasive and must be cared for with spoon excavators.

It is our opinion that the Airdent will decrease the use of burs and stones considerably in any dental practice. It is apparent that cavity preparations for amalgum restorations may be almost completely finished with the abrasive, followed by hand instruments to bevel the cervical margins. We have found that undercuts may be formed by the Airdent, but at present we are using a small round bur in the proximal box to ensure the retention. It is also believed that silicate preparations may be virtually completed by the Airdent alone, with the occasional use of round burs for retention.

Undoubtedly burs and stones will be used more in finishing gold inlay cavities than in any other type. This will be necessary to insure the proper taper and smoothness of such preparations. The large bulk of cutting, however, may readily be done with the Airdent.

Old amalgam fillings may be remov-

ed quite readily by cutting around them at their margins, thus destroying their retention and allowing them to be lifted out.

To quote Dr. Black. "The airbrasive technique is not intended as a method of making better tooth preparations, but rather as a means of preserving the teeth which is acceptable to the patient."

Cleansing and polishing teeth. A second material contained in the Airdent is available by a simple turn of a switch. It is much softer material — dolomite, a carbonate of calcium and magnesium — and is designed as a prophylactic cleansing agent to remove stains from enamel surfaces and also will remove deposits of calculus which lie occlusally to the free margins of the gingival tissues.

As an operator gains experience with this method, he will find in his practice a constant reduction of the use of burs and stones. Whether or not he will ever be able to discard them completely is doubtful. The exception to the use of the Airdent must always be borne in mind; it may not be used if a rubber dam cannot be successfully placed upon the tooth or if excellent vision of the cavity is not possible.

Dr. Paul Jeserich has frequently stated that if he were in active practice, he would insist upon having an Airdent if he could use it only for the bulk cutting of cavity margins and the removal of stains from teeth.

If the use of the airbrasive technique is as successful as one would predict at the moment, the impact upon dentistry will be great and significant. It is intriguing to imagine what favourable changes may be made in the future practice of dentistry if one or two generations of our people become accustomed to such treatment. It will be wonderful if fear is removed from dentistry.

So long as we love, we serve. So long as we are loved by others I would almost say we are indispensable; and no man is useless while he has a friend.—Robert Louis Stevenson.

EFFECT OF ACID BEVERAGES CONTAINING FLUORIDES UPON THE TEETH OF RATS AND PUPPIES

by J. S. RESTARSKI, D.D.S., M.D.S., R. A. GORTNER, Jr., M.S., Ph.D.,
and C. M. McCAY, Ph.D.—Bethesda, Md.

Summary of paper in Minn. Dist. D. Jour., Dec., 1949.

1. Severe destruction of the enamel on the molars of white rats was produced by allowing the animals to drink a popular soft beverage for periods of five days or more. With prepared solutions with the same sucrose and phosphoric acid concentration and the same pH as the commercial product, similar results were observed.

2. Preliminary observations on six puppies showed that consumption of acid drinks also produced gross and microscopic changes on their deciduous teeth.

3. The inclusion of 1 to 20 parts per million of fluorine (as sodium fluor-

ide) in the acid beverage decreased, but did not prevent completely, the destruction of the enamel in the majority of rats studied. Within the limits tested, no apparent differences were observed in the protective action of different levels of fluorine.

4. The presence of sucrose in the acid drink aggravated the effect of the acid. The molars of rats receiving a 10 per cent sucrose-phosphoric acid solution were much more affected than those of a comparable group receiving an equal amount of saccharin-phosphoric acid solution of the same sweetness, viscosity and acidity.

SILENCE PLEASE

by KAY SCOTT—Brantford, Ontario

Prize-winning Clinic O. D. N. & A. A. Convention, May, 1949

Reprinted from Bul. of Ont. D. Nurses' and Assistants' Assoc., June, 1949.

In every office there is so much annoyance caused from unnecessary noise. There is so much we can do to avoid this.

1. Place list of patients for the day in a convenient place for the Doctor to see. Mark off with a cross as each patient arrives. This saves unnecessary talking.
2. Instead of repeating phone messages to the Doctor verbally in the hearing of a patient try writing the message as briefly as possible on a phone pad, and hand it to the Doctor out of the patient's sight. This will also furnish a telephone call record.
3. When the telephone is within hearing distance of a patient, always turn from the operating room when talking and speak softly into the telephone.
4. It's so nice for assistants to visit and laugh while at work, but remember this destroys the profes-

sional atmosphere of an office and can be a source of great annoyance to a patient. Always wait until after closing for your gaiety.

5. When speaking to patients in a reception room, always close doors between operating and reception rooms. Patients like to feel their business is private.
6. When putting instruments into sterilizer, place them in one or two at a time. Dropping a handful at one time creates the impression one is in a boiler factory.
7. The lid of the sterilizer can be closed gently or can be banged. Which do you do?
8. When replacing instruments into trays, place gauze or Kleenex on tray to tone down the clatter.
9. Avoid dropping instruments. Not only does it frighten the patients, but it ruins the points of the instruments.

10. When washing blood stains from instruments in the sink before putting into sterilizer, half fill the bowl with water. This breaks the noise of the instruments against the porcelain basin. Avoid leaving the tap running.
11. Turn off the saliva ejector as soon as the patient is finished with it. The sound is unfamiliar and annoying to a patient. You are accustomed to it.
12. Doors banging or not closed softly are as irritating in a dental office as they are anywhere else. Always close doors properly and softly.
13. And those cabinet drawers . . . do you close them gently or do you make one continuous stroke so each closes like the rat-tat-tat of a machine gun?
14. Do you walk or do you stamp? Try wearing shoes with rubber soles and heels. They are much quieter and more comfortable.
15. When investing inlays or filling lab flasks with plaster, always be sure to tap on a heavy cloth or magazine.
16. Plan to have inlays ready for casting when no patient is in the operating room.
17. The garbage disposers should be of a smoothly operating type to avoid banging the lid. If one is used with a lid, try lining the top of it with rubber.
18. Use a heavy weight paper tray cover on the bracket table before setting up a tray. This deadens the clatter of the instruments being placed on it. For a tray set up where heavy instruments are used for an extraction, use a heavy sterile napkin and fold over the instruments to hide from the patient's view.

If you would be pungent, be brief, for it is with words as with sunbeams, the more they are condensed the deeper they burn.—Southey



Daily Express, Glasgow, Scotland, Dec. 22, 1949

"Dentist says if there are any more of you thinking of fitting one another up with National Health teeth for Christmas presents you've had it."

THE NEED FOR SHORTENING SCIENTIFIC PAPERS

by WALTER C. ALVAREZ, M.D., Division of Medicine

*Condensed from paper in Proceedings of the Staff Meetings of
the Mayo Clinic, Aug. 17, 1949*

There has always been a need for shortening papers, but today this is becoming acute. With the soaring costs of printing and production, editors and publishers of journals are being compelled to cut down the number of pages per volume. A journal which, in 1947, made money may today be facing a deficit.

Another difficulty is that today no man can keep up with all that is being published, even in his specialty. Under these circumstances, the writer whose papers are most likely to be read is the one who makes them short and interesting. If he interrupts his text with boring material, many readers will quickly turn over the pages to the next article.

Today, the ablest physicians, whose attention all writers want most to attract, are in the habit of quickly skimming through large numbers of articles, looking always for one thing, and that is something new, significant, important and usable. Without any of the accompanying rehash, this grain of wheat could usually have been reported on a page or two.

Fortunately, most papers are not injured by shortening; they really are improved, and the author is benefited.

The worst thing a man can do is to write pages of introduction filled with tiresome statements the truth of which everyone knows, such as that the aetiology of the disease under discussion is obscure and that some have said this and some that without getting anywhere. The ablest writers try at the start to so grip the interest of the reader that he will want to go on and see what was done and found.

Having excited interest the writer will try to hang on to it. The last thing he will want to do will be to put

in extraneous or uninteresting material which will cause the reader to give up.

Many writers discourage their readers by inserting early in the paper a page or two on needless statistics or on the technique used. A wise writer will then put these details in an appendix at the end of his article where they will not interrupt the flow of the argument.

Big tables should usually be left out because so few readers stop to study them, and the cost of setting them is great. Oftentimes the data in several tables could, with great advantage, be shown in a graph or two or could be summarized in a couple of sentences. The reader does not want to have to stop and dig out the information; he wants it epitomized and given him by the author.

The summary should be written with particular care, because today most readers and most abstracters read only this part of an article. When a writer fails in his summary to mention all the important things he found he cheats himself.

There probably never was a good paper which was not worked over several or many times. The writer will do well to search through his pages for every sentence and word that can be deleted without taking from the essential message. Every sentence that is vague should be rewritten until it can have but one meaning and that an obvious one. Finally, the writer who would have his papers widely read will do well to use, when possible, the short Anglo-Saxon word rather than the long one of Latin or Greek derivation. This makes for easier reading; and the tired doctor, when he comes home at night from what he hopes is his last call, much appreciates easy reading, with simple English words and short and simply constructed sentences.

STEPS TOWARD WORLD HEALTH AND SECURITY

by JOHN H. ARNETT, M.D.

Associate Professor of Medicine, University of Pennsylvania Graduate School of Medicine,
Philadelphia, Pa.*Condensed from Transactions of the College of Phys. of Philadelphia, Dec. 1949.*

It is related in the Second Book of Kings that the King of Syria sent Naaman, the Captain of his host, to the King of Israel to be cured of his leprosy. No doubt before, and certainly since then, some form of co-operation between nations in matters of health has been practised from time to time. It was natural, therefore, that a health organization should have been included among the specialized agencies of the League of Nations, and of the United Nations. Neither was in any sense an international health service with enforcement powers, but rather a co-ordinating, expediting and informational body.

At the San Francisco Conference on July 22, 1946, the representatives of all 51 states which were then members of the UN, and 13 non-member nations, unanimously adopted the World Health Organization (WHO) constitution and set up an interim commission composed of representatives from 13 states. The constitution of the World Health Organization defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity".

The WHO budget for 1950 is \$7,501,500, with a supplementary operating budget of \$10,624,410, the amount of expense being equitably distributed among the participating states. It is hard to understand, therefore, why Russia should have announced on February 16, 1949 that because of dissatisfaction with the work of WHO, for reasons of economy, she was withdrawing. It would appear that a good start had been made toward world health, and that a health levy on one nation equalling only that of 2 or 3 bombers was not exorbitant.

What of the future of WHO? This depends, of course, upon the future of the UN, which, in turn, is in the lap of the gods. The human race has learned by bitter experience that there can be no peace without justice, no justice without law, and no law without government to make, interpret and enforce that law. The application of this dictum to the League of Nations and UN is obvious. A brief perusal of the Covenant of the League of Nations and of the UN charter is sufficient to convince anyone that whatever their merits may be, these organizations were never vested with the essentials of government. The need for strengthening the UN into a federation which is capable of enacting, interpreting, and enforcing world law for world peace before it is too late is becoming so obvious that at the present time there is a movement on foot for the introduction of a Congressional Resolution which shall state, "It is the sense of the Congress that it should be a fundamental objective of the foreign policy of the United States to support and strengthen the United Nations and to seek its development into a world federation open to all nations with defined and limited powers adequate to preserve peace and prevent aggression, through the enactment, interpretation, and enforcement of world law".

Perhaps humanity has attained sufficient experience and maturity to tear itself away from the time-honoured vicious circle of international anarchy and recurring wars. If not, the outlook for public health and preventive medicine, and, indeed, for civilization itself, is grim.

Habit is a cable; we weave a thread of it every day, and at last we can not break it.—Horace Mann.



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Editorials

A WARNING AND A REQUEST TO ALL DENTISTS

This article can be summed up in two statements: First,—“Do not allow copies of the Journal of the Canadian Dental Association to remain in your reception room where patients have access to the same”, and second,—“When presenting papers for publication in the Journal, if said paper contains a photograph of some patient, be sure to secure the permission of the patient to have his picture so published before submitting the manuscript.”

If you are curious as to why this warning and request the following should prove interesting. A few months ago a paper appeared in this Journal containing pictures of a patient whom we shall call Mr. X. This patient had had a very serious accident and by skilful surgical procedure a very fine result was obtained. The Journal containing this article and pictures was left in the reception room of a certain dentist. A lady patient picked it up and recognized the picture of her friend and neighbour. She, of course, did not keep what she had learned, seen and read to herself which resulted in some embarrassment in the neighbourhood, or shall we say, self-consciousness on the part of Mr. X. and his family.

In some circles where the matter was being discussed the question arose as to whether or not such a patient could seek damages through the courts. Fortunately, in this case, Mr. X. is so delighted with the miracle which has been performed upon himself, and he is so grateful to the surgeons who operated upon him, that he cannot work up any special resentment. However, he does feel that while he would gladly have his case presented to the profession where it might be the means of helping some other unfortunate,

that his photograph and history should not be made available to the general public, and in this we heartily agree.

Of course, this might happen in a case where the results were not so satisfactory and where the patient's mental attitude might be very different to that of Mr. X., and where legal advice might be sought for redress.

Many articles appear in the *Journal* from time to time which are not intended for public consumption and are, from the standpoint of our members, confidential. Therefore, in the interests of our profession, its *Journal*, and also the privacy and well-being of our patients, please keep these *Journals* in your private library or some place where they will not be available to the public at large.

M.H.G.

OUR NATIONAL CONVENTION

May 14 to 17 will be days long to be remembered in the annals of Canadian Dentistry when dentists from coast to coast will meet in Toronto to celebrate the 75th Anniversary of the founding of Dental Education in Canada. We will meet to work, to study, to play, to enjoy social intercourse with old friends and find solutions for the many problems which have been accumulating during the past months.

This will be more than a Convention. It will be also a vacation and should not be missed by anyone. Someone has written—"Vacations give us perspective, enable us to stand apart and look at ourselves in a changed light and under changed conditions. Cobwebs of constant application are swept away and evaluation of the past and preparation for the future can be better appreciated.

"Vacations are wonderful and coming infrequently are more so in emphasizing daily blessings which might otherwise pass unheeded."

If we are to hope to even approach our ideals we cannot afford to miss an opportunity for advancement such as will be made available at this great gathering. Carl Schurz in 1859 wrote—"Ideals are like stars; you will not succeed in touching them with your hands. But like the seafaring man on the desert of waters, you choose them as your guides, and following them, you will reach your destiny."

Success in the practise of Dentistry is obtained very much like character is built, by continual study, by building step by step, by consulting with others who have already reached the goal in some particular field. Henry Ward Beecher said—"Character is built as cathedrals are built—the part nearest the ground finished, but the part which soars to heaven, the turrets and the spires, forever incomplete." As dentists we can never hope for perfection. We can never feel so long as health remains that we have reached the pinnacle, but we can climb higher and higher by attending such functions as the one being so carefully planned for Toronto in May.

M.H.G.

BOOK REVIEWS

A Textbook of Bacteriology for Dental Students. 3rd ed. by Arthur Bulleid, L.R.C.P. (Lond), M.R.C.S., F.D.S. (Eng) and C. W. Shuttleworth, L.R.C.P. (Lond), M.R.C.S., F.D.S. (Eng). Published by William Hienemann, Medical Books Ltd., London, 1949.

This small book (240 pages) no doubt meets the authors' objectives—"to meet the needs of the dental student reading for the higher dental qualifications" in England, but it falls considerably short as an adequate textbook of bacteriology for dental students. It conforms to an all too familiar pattern in presenting the subject as a condensation and simplification rather than as a basic science which must ultimately contribute in no small measure to the understanding of most dental diseases and which therefore should be approached comprehensively.

The book is divided into three parts. Part I deals with general properties of bacteria, methods of studying them, antibiotics and chemotherapy, and finally immunity. A good deal of technical information is supplied, particularly on staining techniques, media and cultural methods, Penicillin is discussed adequately but other antibiotics and chemotherapeutics are given very brief treatment. Many of the newer important antibiotics are not mentioned. The chapters on immunity and allergy express opinion which is not representative of the most widely held views. For example, multiplicity of antibodies to a single antigen is stated as fact though most immunologists today reject this concept.

Part II deals with organisms which the authors feel are important to the dental student. Certain groups of pathogens, for example *Brucella* and *Pasteurella* are not even mentioned. Organisms of special dental significance such as the lactobacilli and green-streptococci are treated with the same brevity as the medical pathogens, most of which are dispensed with in a page or two. Some statements are made which appear quite unsupported by the available evidence e.g. —the statement is made (p. 100) that dental disease is caused mostly by a brand of streptococcus!

Part III is concerned with isolation of organisms from lesions, and other techniques considered applicable to dentistry. Emphasis is placed on the value of routine bacteriologic

investigation in dental disease though little evidence of its value is presented. Considerable space is devoted to the use of vaccines in relation to dental lesions, a procedure of doubtful value in view of the effectiveness of antibiotics in most instances. Other non related subjects treated in this section include mouth amoebae, blood examination and dental caries.

In relation to the term "Textbook" appearing in the title, the book is not a success. Apparently in their efforts to condense the subject matter the authors have oversimplified to the point of creating misleading information.

J. B. Macdonald

on Staff, Faculty of Dentistry,
Univ. of Toronto

Dental Roentgenology by Leroy M. Ennis, D.D.S., Professor of Roentgenology in the Thomas W. Evans Museum and Dental Institute School of Dentistry, Univ. of Pennsylvania; Professor of Clinical Radiology in the Graduate School of Medicine, Univ. of Pennsylvania; Civilian Consultant, Dental Roentgenology, United States Navy, United States Army and Veterans Administration. Fourth Edition, thoroughly revised. 538 pages and 1207 illustrations. Published by the Macmillan Company of Canada. Price \$12.00

It is eighteen years since the first edition of this book was published and since then great strides have been made in dental roentgenology and for this reason many justifiable revisions and additions have been made to the text.

This book has been written to aid practitioners and students in acquiring and perfecting an effective technique in the exposure and development of roentgen films and to aid them in their accurate interpretation. As the author points out there can be no correct interpretation without a thorough understanding of pathology, so the largest section of this book is devoted to dental pathology in its relation to roentgenology.

The book deals with the Roentgen-Ray Tube; Roentgen-Ray Dermatitis; Intra-oral and Extra-oral Technique; Examination of Children; Methods of Localization; Examination of Edentulous Patient; Dental Films; Routine Examination; Normal Anatomical Landmarks of the Teeth and Jaws; Dental

Pathology in Relation to Roentgenology; and Localization of Root Canals and Fistulous Tracts by use of Lipiodol.

As we must concede that it is impossible to practise dentistry properly without the aid of roentgenology and that no factor in practise plays a more important part, one naturally turns to a book of this kind with particular interest and that interest is sustained throughout its pages.

M.H.G.

Root Canal Therapy by Louis I. Grossman, D.D.S., Dr. med. dent. Assistant Professor of Oral Medicine, the Thomas W. Evans Museum and Dental Institute School of Dentistry, Univ. of Pennsylvania. Third Edition, thoroughly revised with 119 illustrations. Published by The Macmillan Company of Canada. Price \$7.80.

This book contains chapters on the following subjects:—History of Root Canal Therapy; Anatomy of Root Canals; Diseases of the Dental Pulp; Diseases of the Periapical Tissues; Examination and Diagnosis; Pulp Capping; Pulpotomy; Pulp Mummification; Pulpectomy; Pulpless Teeth and Focal Infection; Selection of Cases for Treatment;

Principles of Root Canal Treatment; Preparation of the Root Canal; Sterilization of the Root Canal; Bacteriological Examination; Filling of the Root Canal; Treatment of Fractured and Traumatized Anterior Teeth; Root Resection; Bleaching of Discoloured Pulpless Teeth; and a chapter on Treatment of Deciduous Teeth by Elsie Gerlach, D.D.S., Director of Children's Clinic, Univ. of Illinois, College of Dentistry.

The author points out that no single antibiotic will destroy the varied flora found in the canals of pulpless teeth, that a combination of antibiotics effective against gram positive and gram negative organisms (including resistant strains) as well as against yeasts, is necessary. The author has found that poly-antibiotic treatment of infected root canals with a suspension of penicillin, bacitracin, streptomycin and caprylate sodium (PBSC) has been phenomenally effective; negative cultures being obtained usually after only 1 or 2 treatments.

Great progress has been made during the past few years in the field of endodontics and this book should be perused carefully by those practising this branch of dentistry. M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

1. Lt.-Col. K. C. Berwick, who retired as Commanding Officer of No. 3 Coy., R.C.D.C. (R.F.), effective November 30, 1949, has been succeeded by Lt.-Col. M. L. Donigan.

2. Lt.-Col. C. L. Strachan, E.D., the original Commanding Officer of No. 1 Coy., R.C.D.C. (R.F.), has retired after serving 2½ years. Lt.-Col. H. L. Windrim assumed command on January 1, 1950.

3. A Company Commanders' Conference was held at Army Headquarters, Ottawa, February 20-23, 1950, the first since February, 1948. Those attending the Conference were, Col. E. M. Wansbrough, Col. C. B. H. Climo;

Lt.-Cols. R. E. Carroll, F. R. Drewry, W. E. Meldrum, K. M. Baird, G. B. Shillington, F. J. MacLean and H. L. Harris; Majors J. A. MacGowan, T. L. Marsh, J. K. McNally and Capt. J. G. Hamilton.

4. Continuation courses on Operative Dentistry and Radiography, conducted at the University of Toronto during the month of February, were attended by Majors E. C. Purdy and B. P. Kearney, respectively.

5. Colonel E. M. Wansbrough, Director General Dental Services, attended the first meeting of the Defence Medical Dental Services Advisory Board held in Ottawa February 9 and 10.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Statistical Data re Dental Personnel

Data relating to Dental Personnel in Canada is set forth in five tables which follow. The

Province of Newfoundland is included in this annual census for the first time.

Table I shows an increase in the total num-

ber of dentists of 78 over the total figure for last year. The year 1938 has been used for a number of years as the basic year for comparative purposes. There are now 453 more dentists in Canada than in 1938.

Comparison of the ratio of dentists to population with that reported last year shows that with the exception of Alberta, Quebec, and Saskatchewan, the position has worsened. The increase of population, during recent years, has been the factor responsible for this occurrence.

Any prediction for the future is hazardous. Further increases in the population are unpredictable. However, current estimates for the immediate future predict further increases. Certain observations may be made respecting the availability of dental personnel. The years 1950 and 1951 should show appreciable increases in the total number, owing to the fact that two large post-war classes will gradu-

ate from the dental schools. Following those years the graduating classes will fall back to normal numbers.

Cursory study of the age factor indicates that the loss by death and retirement is apt to increase materially in the next few years. The percentage of Canadian dental personnel above the age of fifty is high. An emergency now, such as occurred in 1939, would find a very different situation in respect to available personnel. This situation is accountable by the fact that large additions were made to dental personnel during the years 1920 to 1928 followed by comparatively small additions from 1929 to 1940.

As will be noted by Table II the movement of dentists during the past year has been almost nil. The total number of specialists (Table III) increased by two over the number reported for the next preceding year.

TABLE I
STATISTICAL DATA RE DENTAL PERSONNEL IN CANADA

(as reported by Provincial Registrars)
As of January, 1950

No. of Dentists Reported During Year of 1949							Total Increase or Decrease 1938*	Ratio Total No. of Dentists per Capita Population
Province	Male	Female	Totals	Deaths	Retirements	Additions		
Newfoundland.....	19	0	19	1	0	3	—	1/17895
Prince Edward Island.....	29	0	29	0	0	0	—1	1/3241
Nova Scotia.....	170	1	171	7	3	9	+2	1/3772
New Brunswick.....	105	0	105	3	0	5	—5	1/4914
Quebec.....	1085	5	1090	12	12	59	+216	1/3566
Ontario.....	1972	23	1995	35	13	60	+63	1/2211
Manitoba.....	239	1	240	3	3	10	—11	1/3242
Saskatchewan.....	206	3	209	6	3	20	—1	1/4120
Alberta.....	282	1	283	1	1	19	+47	1/3078
British Columbia.....	483	3	486	7	2	30	+124	1/2292
Totals.....	4590	37	4627	75	37	215	+453	1/3002

Population figures used in this table are those issued by the Federal Bureau of Statistics as of June, 1949 including population of Newfoundland estimated to be 340,000.

*Figures for increase or decrease as compared to the pre-war year 1938 are given for comparative purposes.

TABLE II
MOVEMENT OF CANADIAN DENTISTS DURING 1949

To:	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	U.S.A.
From:											
Newfoundland.....	0	0	0	0	0	0	0	0	0	0	0
Prince Edward Island.....	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia.....	0	0	0	0	0	0	0	0	0	0	0
New Brunswick.....	0	0	0	0	0	1	0	0	0	0	0
Quebec.....	0	0	0	0	0	0	0	0	0	0	0
Ontario.....	1	0	0	0	0	0	0	0	0	0	0
Manitoba.....	0	0	0	0	0	0	0	0	0	0	0
Saskatchewan.....	0	0	0	0	0	0	1	0	2	1	0
Alberta.....	0	0	0	0	0	1	0	2	0	1	1
British Columbia.....	0	0	0	0	0	1	1	0	0	0	3

TABLE III
NUMBER PRACTISING SPECIALTIES, BY PROVINCES
 (Only those practising the specialty designated full-time enumerated)

	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
Dental Oral Surgeons (Exodontists).....	0	0	1	0	3	24	3	0	1	3	35
Orthodontists.....	0	0	1	0	13	23	2	0	2	7	48
Periodontists.....	0	0	0	0	2	13	1	0	1	3	20
Pedodontists.....	0	0	0	0	0	2	1	0	0	3	6
Totals.....	0	0	2	0	18	62	7	0	4	16	109

TABLE IV
NUMBER EMPLOYED IN HEALTH SERVICES BY PROVINCES

	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
Dental Schools: (Teaching Staff)											
Full-time.....	0	0	2	0	8	9	0	0	1	0	20
Half-time.....	0	0	0	0	15	7	0	0	7	0	29
Hospital Service:											
Full-time.....	2	0	0	0	0	18	0	2	0	1	23
Half-time.....	0	0	0	0	0	5	0	0	0	1	6
School Dental Service:											
Full-time.....	0	0	1	0	8	12	1	0	3	10	35
Half-time.....	0	0	2	2	0	49	3	1	2	3	62
Public Health Service:											
Full-time.....	0	0	1	1	8	11	1	1	2	2	27
Half-time.....	1	0	0	0	6	0	0	0	0	0	7

TABLE V
TOTAL NUMBER EMPLOYED BY FEDERAL DEPARTMENTS
 As of January, 1950

Department of Veterans Affairs.....	48
Department of National Defence.....	79
Department of National Health and Welfare.....	5
Total.....	132

DENTAL ASSISTANTS

BRITISH COLUMBIA

Vancouver Dental Assistants' Association

The annual meeting and installation of officers of this Association was held February 6, with Dr. Hamilton E. Simmons, President, acting as installing officer in a candlelight ceremony.

OFFICERS ELECTED AND INSTALLED WERE:

Miss Helen Imlaw—President

Miss Dee Cliffe—Vice-President

Miss Lillian Chamberlain—Treasurer

Miss Mildred M. Armstrong—Secretary

Attendance was very good, in spite of poor weather conditions. MILDRED ARMSTRONG.

Victoria Dental Assistants' Association

The Annual Meeting of this Association was held on January 10. The election of officers for the year 1950 took place. Those elected to office were:

President, Marcia Boyce; Vice-President, Laverne McColm; Secretary, Yvonne Taylor; Treasurer, Shirley Collison; Programme Convener, Beverley Reynolds; Social Convener, Doreen Dop; Membership, Jean Fraser.

On February 7, the monthly meeting was held at which Mrs. Finland and Mrs. Maxwell of the Beauty Councillors of Canada gave an interesting lecture and demonstration, after which tea was served. YVONNE TAYLOR

ALBERTA

Edmonton & District Dental Assistants' Association

Due to the extreme cold weather, the January meeting of this Association was postponed to February 1, at which time a dinner meeting was held.

The main topic of the evening, was a unanimous decision to hold a spring clinic here the first week in May at the Macdonald Hotel, with the invitation open to all Alberta dental assistants.

The enthusiasm of the girls shows promise of a successful clinic, and we are sincerely hoping that these clinics will now become an annual event.

W.E.A.

SASKATCHEWAN

Saskatoon Dental Nurses' Association

This Society held its regular meeting on February 7, at 812 Canada Building, with nineteen girls present. The constitution was read and adopted. The girls decided also on blue and gold as their colours. After the adjournment the social committee served a dainty lunch.

R. HALVARSON.

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

This Association held its regular meeting March 13 at Moore's. The program was both interesting and informative. Papers were given by the following girls:

Jean Clements—"The Ideal Dental Nurse"

Margaret Kitching—"The Recall List"

Florence George—"X-Ray Technique"

Alice Sellers—"Exodontia"

Martha McKinnon and Ethel Brown —
"Pouring Models".

F. JEFFREY.

QUEBEC

Montreal Dental Nurses' and Assistants' Association

This Association held its monthly meeting in Salon "I" of the Mount Royal Hotel on February 6.

The president, Miss Margaret Good, introduced the speaker, Dr. G. B. Gilbert, Chief Anaesthetist of The Herbert Reddy Memorial Hospital. His subject was: "The Role of the Dental Assistant in General Anaesthesia."

Dr. Gilbert outlined the history and development of anaesthesia from the experiences of Doctors Morton and Wells to present day anaesthesia.

The Doctor said that the efficiency during the operation demands the cooperation of the supporting team, and that the assistant can be most valuable by obtaining all information important to the anaesthetist at a previous appointment. The tray, with everything required, should be prepared prior to the operation. The patient should also be prepared: make sure they have been to the bathroom, clothes loosened, wrist watch and all dentures removed.

During the operation the assistant can greatly assist by keeping the operating field clean by suction and swabs, and by keeping clean forceps, etc. Following the operation have the patient assume a sitting position and ask him to expectorate, or if this is impossible to cough. Approximately 15% of the patients

MISS MARGARET GOOD

President of the Montreal Dental Nurses' and Assistants' Association



vomit. After a period of rest the patient may be allowed to proceed home.

A table clinic was next presented by Miss Kay Wolthausen, D.A.

Miss Wolthausen made the following observations and recommendations:

Every dentist has his own method of arranging his cabinets but it is up to the dental assistant to keep them orderly and clean.

After every patient see that the cabinet is cleaned; do not leave used cement slabs on

top, but take these to the lab until you have time to clean them. The cabinet should be neat and clean for each patient as it was for the first patient of the day.

All drawers will look much cleaner if lined with shelf paper. To keep drawers from sticking rub ordinary soap on the bottom.

Have a certain place for everything you keep in your cabinet and see that when taken out it is put back in the same place; this will save the doctor's as well as your own time.

ANNOUNCEMENT

JOINT CONVENTION PROGRAM OF THE ONTARIO DENTAL NURSES' AND ASSISTANTS' ASSOCIATION AND THE DENTAL NURSES' ALUMNAE OF CANADA

(subject to change)

SUNDAY, MAY 14

- 3.00 p.m. O.D.N. & A.A. Board Meeting
- 6.00 p.m. O.D.N. & A.A. Reception—Parlour D
- 7.46 p.m. Dental Nurses' Alumnae Reception—The Library
- 8.45 p.m. O.D.A. Musicales

MONDAY, MAY 15

- 8.30 a.m. Registration
- 10.15 a.m. Parlour D
Call to order
Invocation
Pledge to the flag—The National Anthem
Welcoming addresses and greetings
Adoption of programs
- 11.14 a.m. Dr. Hermann Becks
"The Development and Maintenance of the Health of the Oral Structures"
Luncheon—Your choice
- 2.00 p.m. Representative of the American Dental Assistants' Association
- 2.30 p.m. Dr. Charles Franzwa
- 3.00 p.m. Business Meeting of the Canadian Dental Nurses' and Assistants' Association
- 6.30 p.m. O.D.N. & A.A. Banquet, honouring our President, Mrs. Helen Wilkinson—
Crystal Ball Room
Achievement trophy
Membership trophy
Co-operation trophy
Irean Bruce Bulletin Trophy
Entertainment
- 8.00 p.m. Exhibits

TUESDAY, MAY 16

- 8.30 a.m. Registration
- 9.10 a.m. Call to order
- 9.15 a.m. Miss Day—Trans-Canada Airlines
- 10.00 a.m. Dr. E. R. Romine—"Operative"
- 10.45 a.m. Beauty Counsellor Representative
- 12.00 noon Luncheon for Independent Members
- 12.30 p.m. Dental Nurses' Alumnae Luncheon—The Library
- 1.30 p.m. Meeting of the Independent Members with the Board of Governors of the O.D.N. & A.A.
- 2.00 p.m. Table Clinics
- 4.30 p.m. Meeting of the Advisory Board and O.D.N. & A.A. Board of Governors

WEDNESDAY, MAY 17

- 9.15 a.m. Call to order
- 9.30 a.m. Mr. Bloncairze—"Care of the Handpieces"
- 10.15 a.m. O.D.N. & A.A. Annual Business Meeting
- 12.30 p.m. Official Luncheon, Roof Garden
Clinic trophy
2nd Prize Clinic Plaque
3rd Prize Clinic Award
O.D.N. & A.A. Installation Service

NEWS FROM THE PROVINCES

BRITISH COLUMBIA

Convention at Kamloops

As this issue of the Journal reaches the dental population of British Columbia, the trek to Convention headquarters at Kamloops should be fully planned. May 5th and 6th are the big days, this year, and the innovation of a Convention at an Interior center should provide an unusual attraction to every dentist in the Province. The educational program has been carefully set up, during the past several months, and those attending the meeting will have the privilege of hearing very capable lecturers on popular subjects, and a choice of many subjects to be presented as chair or table clinics. The entertainment features may well be left in the capable hands of the people of Kamloops and vicinity, and we are promised something spectacular and novel, in the way of true ranch country hospitality. Most of the cars travelling up country to this meeting will take advantage of the magnificent scenery along the new Hope-Princeton highway, and up through the Okanagan Valley.

Fraser Valley Dental Society

An interesting evening spent at the study of Inlay Technique featured the monthly meeting of this Society, held at Abbotsford recently. Dr. L. W. Beamish, of New Westminster, was guest clinician. Despite the fact that the Valley was only just emerging from a severe winter, with road conditions at their worst, the attendance was excellent.

Vancouver and District Dental Society

Doctor C. N. Skinner, of Whittier, California, was the guest clinician for the March meeting of the Vancouver and District Society. His afternoon meeting presented methods of inlay impression taking, methods of making dies and models, of investing in vacuum, and burning out and casting. In the evening, his subject was "The Morphologic, Biologic, Mechanical and Aesthetic Principles as They are Related to the Teeth."

Doctor Skinner is a member of the Faculty of The University of Southern California, and Past President of the American Academy of Applied Nutrition.

Conventions of Interest

Meetings across the line, which proved attractive to many British Columbia dentists were the Northwest Conference in Dental Medicine Seminar, from April 9th to 14th, at the Columbia Gorge Hotel, Hood River, Oregon, and the Annual Session of the Oregon State meeting, at Portland from March 5th to the 8th.

Victoria Dental Society

Guest speaker at the February meeting of this Society was Doctor Alfred Parah of the Department of Pharmacology, University of Washington. Doctor Parah, a graduate of the University of Beirut, Lebanon, addressed the meeting on "Pain", outlining the various scientific means of measuring pain, and methods of control.

A pleasing feature of this meeting was a presentation on behalf of the Society, by Doctor R. H. MacDougall, to Doctor A. S. Garesche, of Victoria, who is approaching his ninetieth birthday, and is still engaged in active practice. Doctor Garesche was graduated from the University of Pennsylvania in 1887, practised in Cuba for about twelve years, and then continuously in Victoria to the present. He still enjoys his game of golf, and until about two years ago he was usually listed among those presenting table clinics at the Provincial convention.

Doctor Jacobson, of New Westminster, was the guest clinician for the March meeting.

L.D.J.

ALBERTA

Dr. McIntyre Honoured

Dr. R. R. McIntyre of Calgary has recently been made a Fellow of the International College of Dentists.

He is Honorary Professor of Orthodontia at the University of Alberta, has been active in dental association affairs in Western Canada for some years, and is President of the newly formed Canadian Orthodontic Association.

W.E.A.

Edmonton Dental Society

This Society held one of the most enjoyable evenings of the year which took the form of the annual dinner dance held at the Macdonald

Hotel in Edmonton on February 17. There were approximately 200 present.

As the ladies entered the lounge, they were presented with a beautiful rose corsage. Cocktails were served till 7:30 when everyone sat down to an "Alberta Steak" dinner.

Dr. Henry Freeland, President of the Dominion Dental Council, and his wife were our guests and also from Calgary were Dr. and Mrs. Rayburn McIntyre who represented the Calgary Dental Society. Many out of town dentists of the district and their wives were present. Dr. Clare was present representing the City of Edmonton, and Dr. K. Thomson represented the Academy of Medicine.

After dinner dancing took place in the main ballroom of the hotel, it being set up in cabaret style.

The convener, Dr. Bob Wilson, and his committee are to be congratulated on a highly successful evening. W.E.A.

Lethbridge and District Dental Society

This Society held its February meeting on the 9th at the Marquis Hotel. Dr. Gyllenberg of Longview, Washington, held a most interesting clinic on gold-inlays, crowns and bridgework. The afternoon meeting was followed by a dinner and slides in the evening. A large turn-out was present; country points represented were Blairmore, Pincher Creek, Macleod, Cardston, Raymond and Taber.

D. A. RYLANDS

Winnipeg Dental Society

After several months of attending meetings of the Winnipeg Dental Society at which the guest clinicians were prominent members of our profession from various places of learning in the United States (not forgetting New Westminster, B.C.) excellent as they all were it was a real pleasure to have several Home Talent Study Groups put on a demonstration of their activities including the following subjects:

Better Dentistry exemplified in Amalgam Fillings.

Preventive Orthodontia for the General Practitioner.

The Various Types of Gold Restorations.

Some General Considerations of Gold Inlays.

Some Phases of Endodontia.

Interpretation of Dental Radiograms.

Films covering Dental Health Education.

This was the program of the Society for the March meeting. It was well conceived, well arranged, and something to be proud of. It augurs well for the table clinics we hope to see at the 1951 convention of the Western Canada Dental Society which meets in Winnipeg in June, of next year.

The Society has established another record to be proud of this year. The membership has increased so that about 3 out of every 5 dentists in Greater Winnipeg are members of the Society. This speaks well for the efforts of the Executive of the Society and indicates the interest in Better Dentistry. J.F.M.

ONTARIO

Dental Alumni University of Toronto

At the annual meeting of this society in February Dr. William W. Breslin was elected its new president for the year 1950-51. The meeting took the form of a dinner at the Royal York Hotel, Toronto, with Dr. W. J. Langmaid of Oshawa presiding.

The new officers of the Alumni are as follows—Dr. A. D. A. Mason, Toronto, Honorary President; Dr. J. C. Fullerton, Toronto, 1st Vice-President; Dr. J. A. Marshall, Belleville, 2nd Vice-President; Dr. S. Lee Honey, Welland, 3rd Vice-President; Dr. A. Roy Kerr, Toronto, Secretary and Dr. Gordon Chalmers, Toronto, Treasurer.

The executive members are, Dr. H. R. Bateman, Dr. R. C. Freeman, Dr. W. C. Cavanagh, Dr. W. J. Armstrong, Dr. J. E. Tilson, all of Toronto; Dr. Harry Hutchinson, Port Arthur; Dr. Cecil S. Strachan, London; Dr. E. J. McCartney, Ottawa; Dr. W. W. Baxter, Hamilton; Dr. I. J. Werry, Oshawa; Dr. W. J. Tackaberry, Owen Sound, Dr. L. J. Fenech, Windsor; Dr. R. A. Torrance, North Bay.

Faculty of Dentistry University of Toronto News

1. *Extramural Lectures Presented in March, 1950 by members of the Faculty staff:*

March 1 Dr. D. M. Tanner, at Whitby (Durham-Ontario Dental Society)

March 8 Dr. J. E. Moser, at Peterborough (Peterborough Dental Society)

March 9 Dr. R. E. Moyers, at Brantford (Brant County Dental Society)

March 13 Dr. R. E. Moyers, at Ottawa (Ottawa Dental Society)
 March 14 Dr. C. H. M. Williams, at Sarnia (Lambton County Dental Society)
 March 24 Dr. M. N. Rockman at Kitchener (Inter-County Dental Society)
 March 28 Dr. D. W. Gullett at Windsor (Essex County Dental Association)

2. *Student Participation in Children's Health Days*

On February 6, at the 10th Annual Children's Dental Health Day of the Cleveland Dental Society, table clinics were given, one by K. F. Box on "Ectopic Eruption of Teeth", and the other by A. V. Scrutton, on "Space Maintenance". On Monday, March 13, similar table clinics will be given by senior students A. J. Harriss and E. A. Jones at the 2nd Annual Children's Dental Health Day of the Ottawa Dental Society. The introduction of student table clinics on these programs has proved to be very successful.



DR. E. G. DORE
President of Hamilton Dental Society

Academy of Dentistry, Toronto Executive Council 1949-50

President—Dr. E. L. A. Bancroft
 Past President—Dr. E. A. White
 President-Elect—Dr. G. L. Frawley
 Secretary—Dr. M. G. Boyes
 Treasurer—Dr. R. C. Moore
 East Toronto Dental Society—Dr. J. B. King
 Downtown Toronto Dental Society—Dr. D. H. MacDonald
 Central Toronto Dental Society—Dr. J. S. Wilkinson
 North Toronto Dental Society—Dr. E. J. Henderson
 West Toronto Dental Society—Dr. W. J. Smith

London Dental Society

Some fifty London and district dentists attended a meeting of this Society February 11. Dr. James Purves, Associate Professor of Operative Dentistry, University of Toronto, addressed the group on "Cavity Preparation".

Dr. Lloyd Grose, president of the Ontario Dental Association, brought greetings from that organization.

Hamilton Dental Society

This Association is having a very successful year. It has a membership of 110 mem-

bers with a good representation from St. Catharines, Simcoe, Brantford, Galt, Paris and Burlington.

The opening meeting held in October was top notch with Dr. C. H. M. Williams presenting more new ideas on "Occlusal Correction." This discussion proved most interesting to a large turnout.

The November meeting was well attended and Dr. C. Wright, Professor of Dental Prosthesis at the University of Michigan was guest speaker. His discussion presented a somewhat different approach to the subject. He projected pictures showing the movements of the tongue and the part that it plays in stabilizing the lower denture.

In December the executive committee planned and carried out something different. In the afternoon some of the members provided table clinics assisted by laboratory technicians and supply houses who provided representative displays. At the close 180 members and guests sat down to a Christmas dinner. Rev. Norman Rawson was guest speaker, and in his usual good humoured style, he really capped the day.

The January meeting was planned to have Dr. S. A. MacGregor as the guest speaker. Unfortunately he was ill but in his place Dr. J. McDonald, Assistant Professor of Bacteriology, Faculty of Dentistry, Toronto, kindly



DR. REED O. DINGMAN

attended and presented a good lecture entitled, "The Nature and Significance of Dental Infection in Periodontal Disease."

Dr. Worthington Schenets of Buffalo gave an excellent review of the Crown and Bridge Problems at the February meeting. This was well received by a large attendance.

In March Dr. H. M. Worth of the Faculty of Dentistry staff, Toronto and chief of the radiology department of Wellesley Hospital, Toronto, gave a very excellent discussion of x-ray interpretation.

The April meeting is always somewhat a social meeting but this year it has an added attraction in that Dr. G. V. Fisk and Dr. Don Gullet, President and Secretary respectively of the Canadian Dental Association will attend.

The officers of the Association are mostly young men and they have introduced some new ideas. Older more experienced members too have done much to make this year's program progressive and interesting to all.

President,—Dr. E. G. Dore

Vice-President,—H. C. Thompson

Secretary,—J. V. O'Shaughnessy

Treasurer,—Don Moore

Chairman of Program,—J. Hallbrook

Directors,—W. G. Foster, W. W. Baxter.

Guest Clinicians at the Dental Oral Surgery Course in Toronto

Dr. Reed O. Dingman, Associate Professor of Oral Surgery, Ann Arbor, Michigan, will be one of the Guest Clinicians for the continuation course in Dental Oral Surgery that is being offered by the Faculty of Dentistry, University of Toronto, April 17-21. Dr. Dingman is currently Editor of the Journal of Oral Surgery and enjoys an international reputation.

Dr. F. W. Clement of Toledo will be Guest Clinician on Anaesthesia. Dr. Clement will be remembered by many dental graduates as their former demonstrator in Anatomy at R.C.D.S. He is currently Chairman of the section on Anaesthesiology of the American Medical Association, author of the well known text "Nitrous Oxide Anaesthesia" and is a world recognized authority on nitrous oxide anaesthesia. The Faculty is fortunate in being able to present men of such outstanding calibre.

Ladies Auxiliary to the Academy of Dentistry, Toronto

This Association held a bridge, fashion show and lucky draw at the Arcadian Court, Saturday February 18. Proceeds in aid of Dentistry for needy children with dental abnormalities.

Mrs. W. W. Philip, President of the Auxiliary presided at a luncheon at the Royal York Hotel, January 20. Mrs. W. D. Tucker was the guest speaker.

KATHERINE TREADWELL

Essex County Dental Association

"The Bulletin" of this society has just arrived and it indicates that this association has an aggressive executive and a keen secretary. Here are a few news items it contains—

Perhaps the snowfall discouraged many of the members from attending the February meeting, but those that were present (about twenty-two) enjoyed a most stimulating and

refreshing evening. The filet mignon à la Norton Palmer was extra delicious and Dean Rochon of University of Detroit, our guest clinician, sparkled with wit before, during and after his lecture.

The only criticism of the lecture was that it was too short. Dean Rochon illustrated various points for differential diagnosis of pathological tissue. All members present agreed that Dean Rochon should be our clinician more often.

This is the fourth issue of the bulletin and other than regular contacts with the secretary we are happy to announce that for the first time we have received a news item from a member. Thank you very much Dr. Warren.

Dr. & Mrs. Cec. Young and Dr. and Mrs. Furlong have returned from torrid Florida.

Dr. & Mrs. Ted Wachna spent a week skiing in the frigid Laurentians.

Belated birthday greetings to Dr. Roy Perry for March 13th.

Dr. E. Fenech entertained all members to a stag social evening at his home, Saturday, March 18.

The local committee for the University of Toronto Dental Alumni have done exceedingly well. They have signed and received dues from 75% of the members.

The Michigan State Dental Convention will be held in Detroit on April 24, 25 and 26.

Dr. E. T. McSwain, M.A.-Ed.D., Dean of University College of the Northwestern University, Chicago obtained the following results in a survey of children as to their likes and dislikes about dentists.

In order of importance the results are:

Children's Likes

1. Tell them when it is going to hurt.
2. Pretty and friendly nurse.
3. Children's magazines and books.
4. Not to be kept waiting.
5. Rides up and down the chair.
6. Explain what you are doing.
7. Not to be asked question when his mouth is open.

Children's Dislikes

1. Odor of Dentist's breath.
2. Drilling (naturally)
3. Pressure of dentist leaning or holding them tightly.

4. Saturday morning appointments.

5. Telling the mother that the child was a bad boy.

On March 28 Dr. Don Gullett, perhaps Canada's best known dentist was our guest speaker. His subject was "National Dental Health Services".

Dr. Gullett has written many articles and lectured at meetings and conventions throughout both Canada and United States on this subject. He also spent some time studying the British plan. This background together with his study of the problems concerned enables him to speak as one well versed in the pros and cons of National Health Services. His address was of great interest to the members of this Society.

Department of Health, Toronto adds Preventive Orthodontics to its Dental Public Health Service

Dr. E. A. Grant, director of Dental Public Health in Toronto has just announced the opening of such a clinic at Hester How School. Some years ago a similar service was initiated and developed by Dr. Charles Corrigan in co-operation with the Faculty of Dentistry but due to large post-war classes in the Faculty this service was discontinued in 1947.

Dr. Grant has found in reviewing the surveys of school children in the city that at least 25% have some form of malocclusion and that 10% have serious irregularities. This has created a serious problem which he felt had to be met in some way. Orthodontic treatment he points out is difficult to obtain for two reasons: first—there are very few orthodontic specialists and second—treatment is long, difficult and necessarily expensive even beyond the reach of many people. This is particularly true if preventive treatment is not instituted at the optimum time.

The purpose of this new orthodontic service is to see any case of irregularity for consultation and advice and by this means alone it is hoped to avert many serious cases. Dr. Lorne Riddolls, an, orthodontist will be in charge.

It has been made possible to renew this orthodontic service in Toronto through a generous national health grant of \$15,800.00 from the Federal Government.

QUEBEC**The Montreal Dental Club**

At the regular monthly meeting of the M.D.C. on February 20, a symposium on "Inlays" was presented by four of the club members: Drs. John Chamard, Donald Gordon, Wilfred Johnston and Roland Lamb.

Under the general chairmanship of Dr. Johnston it was stated that the group had recently carried out a survey of some four hundred inlays: an analysis was made and it was found that failures were due to the following factors: recurrent caries; overhanging margins; leaky margins; faulty occlusion; and poor anatomy: these were demonstrated with the use of x-rays.

Dr. Gordon outlined the cavity preparation following Black's technique but warned against too extensive slicing under the gingiva, recommending rather that a box preparation is preferable followed by conservative discing. He warned against the removal of extensive caries just prior to insertion of inlays due to the shrinkage of a large bulk of cement. He also discussed the mixing of cements stressing a slow mix, wide spatulation and the taking of 2½ minutes to complete.

Dr. Chamard followed with a discussion of a direct inlay technique, stressing the necessity of accessibility, cooperation of the patient and box preparations, using pin holes where required for extra retention. He discussed the use and adaptation of amalgam matrix bands as wax retainers in a dry field, and following the application of a separating medium, the insertion of the wax, the "pumping" of it to flow into the pin holes, margins, etc., the carving and removal. To aid the contact, he recommended low fusing wax, cavity varnish or the addition of gold solder to the finished inlay.

Dr. Lamb followed with a discussion of the application of direct inlays to areas of gingival erosion. In such cases, he noted, the pulp has receded considerably and so it is easy to sink pin holes close to the outer margins of the area to a depth of about 1½ millimeters; this is followed by a mere discing of the area. Following the application of a separating medium in a dry field wax is flowed on to the area and pumped into the pin holes. Following finishing, if satisfactory and the pin holes

parallel, the pattern is sprued using a low fusing wax, and cast. Polishing should be done sometime after insertion. Dr. Lamb also discussed the spanning of a one tooth gap where satisfactory restorations are already present; boxes are made in each restoration, sinking several pin holes into each one for retention and waxing directly as described by Dr. Chamard. He also demonstrated the use of such "Inlays within Inlays" to splint two neighbouring teeth together.

Dr. Johnston completed the first session by discussing the method of indirect inlay impressions using a low fusing wax with a flow point of 132°F. A slightly oversized annealed copper band is roughly adapted and filled with wax, softened in a controlled temperature water bath at the above temperature, removed and inserted; this is chilled with room temperature water, removed and trimmed. The whole is resoftened and reinserted with gentle pressure, chilled and if satisfactory only the surface is gently heated in water and then replaced on the tooth with great pressure, chilled and finally removed. This wax impression is now electroplated and to assure an accurate result, the inside of the impression is painted with a conductive paint which becomes part of the finished die.

The second session was composed of three table clinics at which the clinicians demonstrated the above techniques.

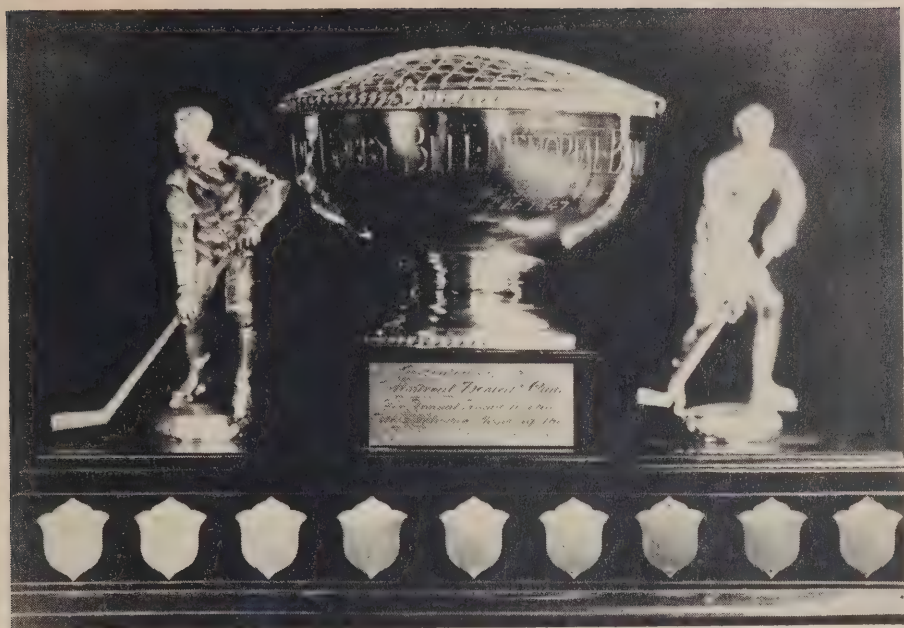
The clinicians were thanked by Dr. E. T. Bourke.

The Mount Royal Dental Society

The regular monthly meeting of this Society was held in the Mount Royal Hotel on February 14. The speaker of the evening was Dr. R. F. Harvey of The Montreal Dental Club who spoke on "The Surgical Treatment of Periodontoclasia."

Dr. Harvey noted that although periodontoclasia claims more teeth than any other disease, Merritt has estimated that only 10% of dental treatment is directed towards its treatment and control.

With the use of drawing, it was demonstrated how from a simple area of inflammation, the periodontal pocket develops whether it be associated with a vertical or horizontal resorption of the bone. The "Bone Factor" as described by Glickman and others was discussed showing the importance of this aspect



Above is a photograph of the "Dr. Bobby Bell Memorial Bowl" the inscription reading "Donated by the Montreal Dental Club for annual award to the most valuable player of the McGill Hockey Club."

This award is made in memory of Dr. Bobby Bell, a past president of the club and former coach of so many championship McGill Hockey Teams in pre-war days.

with regard to the rate of destruction, and prognosis of the individual case.

In the examination, full use of all diagnostic aids was advocated such as full mouth and bite-wing x-rays, vitality tests and study models where indicated, and a thorough clinical examination noting abnormal surfaces, colour and density of the gingival tissue, degree of mobility, the depth of the pocket, and the occlusion.

Factors entering into the prognosis are the amount of bone destruction, rate of bone destruction, aesthetics, bi- or tri-furcation involvement, shape of the roots, strategic requirements, etc.

The advantages of removing the redundant tissue forming the pocket to the point of the epithelial attachment are that a more hygienic condition is established, infected tissue is removed and the patient is able more easily to keep the mouth in a state of health.

X-rays were then shown to illustrate that although they could not determine the pocket

depth, they could assist in noting the amount of bone destruction, the rate of destruction and the prognosis: these were compared with normal and arrested cases.

The disadvantages of gingivectomy, such as aesthetics, hypersensitivity, food impaction, etc., and other methods which could accomplish the same result were also discussed.

As one of the aids in the treatment of periodontoclasia gingivectomy was advocated in selected cases; the armamentarium required:—any gingivectomy knives, scalpel or any sharp wax or amalgam carver which could reach the area. Following the administration of infiltration anaesthesia, the actual operation of gingivectomy is performed step by step as described by Williams:

1. Outline form:—Mark pocket depth by small puncture wounds; 2. Gain access:—joining of the puncture points by one incision cutting at a bevel from the muco-buccal fold to the tooth. 3. Removal of the remaining granulation tissue. 4. Extension for prevention—

cleaning of the area of loose tags of tissue, etc. 5. Toilet:—Application of haemostatic. 6. Dressing:—Zinc oxide and equal parts of eugenol and mineral oil, wondrpak, periodontal pack, etc. It was recommended that the dressings should be changed every two to four days and any areas of granulation tissue cauterized. Definite instructions should be given to the patient regarding home care and he should be recalled for further cleaning and check-up.

Methods of treating intra bony pockets were discussed as well as the use of the surgical removal of tissue to improve and make easier operative procedures.

The speaker was thanked by Dr. P. J. Gittick.

The Montreal Endodontia Society

The regular monthly meeting of this Society was held in the Dental Department of the McGill Medical Building on January 30. In the absence of the president, Dr. L. J. Rosen was in the chair and introduced the speaker of the evening, Dr. W. C. Bushell who spoke on "The Treatment of Accidents to the Permanent Dentition of Children, Including Cases of Partial and Complete Displacement."

The subject was well illustrated with models and slides showing how many apparently hopeless cases could be treated depending on the patience and skill of the operator. A strong plea was made by Dr. Bushell not to remove teeth immediately after an accident, but to wait until the messy stage had been passed.

With regard to completely displaced teeth, it was shown how these teeth could be replanted and serve the patient well for eight to ten years, but how during this period internal resorption would occur resulting in the eventual loss of the tooth. It was noted however, that within very recent years it seemed apparent that such internal resorption could be prevented by the performance of an apicoectomy, thus converting an osteoclastic into an osteoblastic activity.

The speaker was thanked by Dr. George Zimmerman.

The February meeting of this Society was held on the 27th in the Dental Lecture room of the University of Montreal. The president, Dr. H. M. Robichaud, was in the chair.

An extremely interesting review of the proceedings of the recent annual meeting of the American Association of Endodontists was presented by Drs. S. A. MacSween, L. J. Rosen and H. H. Pearson. Each of these clinicians reported in detail the clinics held at the Chicago meeting—then as a group, answered the lively discussion from the floor from the point of view of the original papers.

The papers reviewed were:

"A Roentgenologist's View of Endodontia."

"Root Resection with Immediate Root Canal Sterilization."

"Poly-Antibiotic Treatment of Infected Pulpless Teeth."

"Discussion of Pathologic Processes in Acute and Chronic Periapical Inflammations."

"Root Canal Therapy"—film.

"Periapical Repair Subsequent to Endodontic Treatment."

"Endodontia for the General Practitioner."

"Preliminary Observations of Skin Reactive Substances from the Pathological Pulps of Human Teeth."

Four table clinics were also reviewed.

Royal Victoria Hospital Opens Well-Equipped Dental Section

Provision for better dental health of expectant mothers took a step forward in Montreal recently, with the opening of a new dental department in the Women's Pavilion of the Royal Victoria Hospital.

A member of the Hospital's board of governors generously financed the purchase of the new equipment, and the well-known pharmaceutical firm of Charles E. Frosst & Co. is taking care of operating costs for two years, by means of a fellowship created by this firm.

NEW BRUNSWICK

New Brunswick Dental Society

On the 19th of February a meeting of the Council of the N.B. Dental Society together with the Dental Health Survey committee was held in Fredericton. Progress was reported on the survey.

The usual post war annual prize of \$25.00 was voted to Dalhousie Dental School.

It was recommended that the booklet "Dentistry as a Career" should be placed in all

appropriate school libraries of the province and also that each dentist should possess a copy for ready reference.

Dr. H. H. Peters of Saint John was elected representative to the D.D.C. replacing the

late Dr. F. C. Bonnell. A public relations committee was created consisting of Dr. A. J. Cormier, Moncton, Chairman and Dr. S. K. Donald, Moncton and Dr. H. W. MacDonald, Saint John, as members.

EMPIRE NEWS

GREAT BRITAIN

Dr. J. Menzies Campbell Honoured

Dr. Campbell has been invited to deliver a lecture on the History of Dentistry on May 15 at Edinburgh University, also to exhibit and demonstrate a selection of early dental instruments from his collection. This is the first lecture of this kind to be delivered in any Scottish University.

Milk Causes Bad Teeth in Children

Milk is one of the main causes of bad teeth in children, declares Mr. N. A. James, former school dental officer at Chester.

"If only schools would give their pupils a hunk of cheese and a coarse biscuit instead of morning milk, the nation's teeth would improve almost immediately," he told the Daily Mirror.

Mr. James said he found that the teeth of primary school children are "five times better than those of secondary school children."

And the reason is—homework and late bed times.

"So many children who stay up to do home-

work get hungry and raid the larder just before they go to bed," Mr. James said. "They have sticky drinks which make their teeth ideal breeding places for germs. Even plain milk causes endless damage if it isn't brushed off immediately."—D. Mag. and Oral Topics, Dec. 1949.

Sensitisation To Denture Material As A Cause of Angular Stomatitis

Seven cases are reported in which patients wearing dentures complained of soreness at the angles of the mouth associated with soreness of the gums and, in two cases, with a rash on the face. In some cases the dentures were constructed of vulcanite, in others of plastics, and in all cases the dentures were worn at night. With the exception of one case, patch tests, performed by strapping moist scrapings from the denture in contact with the skin for forty-eight hours, were positive. The symptoms disappeared when new dentures were constructed of another material which gave a negative patch test.—H. R. Vickers (1949) Brit. Med. Journ., 2, 1091.

GENERAL NEWS

Defence Medical and Dental Services Advisory Board

The first meeting of the Defence Medical and Dental Services Advisory Board was held in Ottawa, February 9-10. In many respects this Board will carry on the work established during World War II by the former Canadian Medical Procurement and Assignment Board, in that the resources of medical manpower will be appraised with a view to the most appropriate distribution as between the Armed Forces and civilian population in the event of a national emergency. This Board will enlarge the interpretation of the term medical manpower to include not only doctors, dentists and nurses, but all others who contribute in any

way towards the treatment of casualties and in the maintenance of health at all levels. This would include technicians, dietitians, occupational and physiotherapists, veterinarians, sanitary inspectors, First Aid organizations such as those controlled by the Order of St. John and the Canadian Red Cross. The Board will also review the country's resources in hospital accommodation, not only in the light of those in existence but those contemplated, as well as emergency accommodation required on short notice. An effort will also be made to encourage the construction of future hospitals away from congested areas. This feature is being stressed by the office of the Co-ordinator of Civil Defence.

The Board is made up of as wide a cross-section of both Government and civilian component as will cover the needs of the field of medicine, not only from the standpoint of personnel and accommodation, but of all supplies and equipment which are required to make these function.

The records of medical personnel which were accumulated by the Canadian Medical Procurement and Assignment Board were transferred to the custody of the Department of Health and Welfare and these records have been maintained and kept up to date since the former Board was discontinued. The scope of such records will now be enlarged.

The new Board established four main committees, namely:—Personnel Survey; Personnel Planning; Material Survey; Material Planning. Each committee may set up as many sub-committees as it deems necessary to cover its requirements, and these may be as widely distributed across Canada as will meet the need.

The terms of reference state that "the duties and functions of the Board shall be to advise the Minister of National Defence on all matters pertaining to the provision and assignment of medical, dental, nursing and hospital personnel, hospital facilities and supplies, and to perform such duties in connection therewith as the said Minister may from time to time direct".

The composition of the Board is as follows:

Royal Canadian Navy—Surg. Capt. A. McCullum, OBE, VRD Medical Director General, RCN, CHAIRMAN.

Canadian Army—Brigadier W. L. Coke, OBE, Director General of Medical Services (Army).

Royal Canadian Air Force—Group Captain A. A. G. Corbet, ED, Director of Health Services (Air).

Royal Canadian Dental Corps—Colonel E. M. Wansbrough, OBE, MM, ED Director General Dental Services.

Dept. of Veteran Affairs—Dr. W. P. Warner, Director General of Treatment Services.

Civil Defence—Major-General F. F. Worthington, CB, MC, MM Co-ordinator of Civil Defence.

Dept. of National Health & Welfare—Dr. G. D. W. Cameron, Deputy Minister of National Health. (Dr. H. A. Ansley—alternate).

Dept. of Labour—Mr. G. M. Morrison.

Canadian Hospital Council—Dr. L. O. Bradley.

Canadian Dental Association—Dr. Don W. Gullett.

Canadian Nurses' Association—Miss Agnes J. Macleod, RRC.

Canadian Public Health Association—Dr. Milton H. Brown.

Defence Research Board—Dr. M. G. Whilans.

Defence Medical Association—Brigadier H. M. Elder, CGE, DSO.

Defence Dental Association—Colonel D. S. Coons.

Canadian Medical Association—Dr. J. A. MacFarlane, Dr. Mathieu Samson, Dr. T. C. Routley. (Dr. A. O. Kelly—Alternate).

A.D.A. Membership at Highest Peak in 1949

Membership in the A.D.A. reached 75,609 at the end of 1949, the highest total yet, according to Holly Jarvis, Cincinnati, Chairman of the Membership Committee, who pointed out that this means an increase of 3,461 over 1948, with 342 dentists joining last December.

Dentistry in The World Health Organization

by A. E. ROWLETT, D.Sc. Phila.,
F.D.S., R.C.S., Eng.

Excerpt from Br. D. Jour. Jan. 20, 1950.

Two delegates from the F.D.I. were present by invitation at the World Health Assembly in Rome in June last year. At this meeting Dr. Alexander Krikos, of Athens, submitted a memorandum to the Assembly, drawing attention to the deleterious effects of civilized diet upon the teeth, with statistical details showing the immensely high proportion of children, adolescents and adults suffering from dental disease in Greece.

It was satisfactory to find that the staff of a world health service were in agreement with the appointment of a dental consultant to the staff.

The qualifications were slightly amended from those agreed upon in Paris and were as follows:

"The dental consultant selected would have, in addition to a dental degree or diploma, either a diploma in public health dentistry or comparable experience and training, together with four or five years public dental health experience, which would include a certain

amount of administration. A permanent dental consultant would be required to possess a working knowledge of one other language in addition to his own. A medical qualification would not be obligatory."

Remuneration: \$600 per month tax free, travelling expenses and a subsistence allowance of \$10 per diem when travelling.

Dental Index

A new volume of the American Dental Association's "Index to Dental Literature", covering the period between 1945 and 1947, is now available for distribution.

The publication indexes articles in 144 dental journals in the English language and contains lists of books and magazines on dentistry that were published in the 1945-47 period.

Copies may be obtained for \$10 each through the Order Department, American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

Eighty-Fifth Midwinter Meeting of Chicago Dental Society

Registration at this meeting was practically identical with the last meeting, having a slight increase in the total attendance. Of the total registration of 11,809, 6,082 were dentists and 5,727 were guests. Out of 6,082 dentists, 2,777 were from the Chicago area and 3,305 were A.D.A. visitors.

To Study Operation of New Zealand Plan

Dr. John T. Fulton, dental services adviser of the U.S. Children's Bureau, has been granted a fellowship by the World Health Organization to make a survey of the dental nurses plan being operated under government auspices in New Zealand. Doctor Fulton left for New Zealand on February 11.

Dental Survey In U.S.A.

A comprehensive survey of dental practice will be conducted during April by the Bureau of Economic Research and Statistics of the American Dental Association.

A detailed questionnaire will be sent to one-fourth of the dentists in the United States—including members as well as non-members of the A.D.A.

Purpose of the survey is to compile factual data regarding dental practice which can be used in the development of sound and prac-

tical dental health programs. Such data are needed particularly to counteract the great amount of misinformation and unsupported propaganda that have been advanced in current debates on schemes for the solution of the nation's dental health problems.

1950 A.D.A. Dues Are \$12

Annual A.D.A. dues for active members during 1950 will be \$12, the same as in 1949. At the San Francisco meeting of the house of Delegates a proposal was introduced calling for an increase in A.D.A. dues of \$8, making a total of \$20.

Abuse of the Antihistaminics

*Condensed from Editorial in Can. M. A. Jour.,
March 1950.*

It is to be hoped that the tidal wave of antihistaminics medication for the common cold has subsided, at least from the peak of its height. These drugs have their place, and are of great value in symptomatic relief of hay fever and of the congestive features of allergic conditions: their sedative effect is also unquestionable. But they do not bring us any closer to the control of the common cold, and insofar as the virus element of that is concerned, are not likely to do so.

The possible effects of drowsiness, giddiness, etc., become a very real danger since many people go about whilst taking the drugs.

We should make a point of stressing the fact that these drugs do not have any effect on the virus of the common cold, and also urge that their indiscriminate use is dangerous.

Dental Hygienists Refute Research Training Plans

The American Dental Hygienists Association, while striving to raise educational standards, is not attempting to enter into the field of pedodontia, according to A. Rebekah Fisk, executive secretary of the A.D.H.A.

Chemical Studies in Periodontal Disease

by C. A. OSTRUM, W. G. SKILLEN and
L. S. FOSDICK
Conclusions of paper in Jour. of D. Res., Feb., 1950.

This study has shown that splints did produce pressure changes which might be expected from occlusal trauma and that this experimental occlusal trauma did not alter the gingival glycogen content. Hence, this study fails to support the hypothesis that occlusal trauma is a primary aetiological factor in periodontal disease.

The Effect of Topical Applications of Fluorides on Dental Caries in Young Adults

Conclusions of paper in Jour. of D. Res., Feb., 1950.

At approximately three monthly intervals single quadrants of the teeth of 139 students, aged 18 to 40 years, were treated with solution of 1.0 per cent sodium fluoride or 0.06 per cent lead fluoride.

After approximately fourteen months, the

quadrants treated with sodium fluoride showed 44.5 per cent less new D.M.F. surfaces, or 56.6 per cent less new carious surfaces, than did the untreated control quadrants on the opposite sides of the mouths.

The quadrants treated with lead fluoride showed 27.5 per cent less new D.M.F. surfaces, or 38.5 per cent less new carious surfaces, than their control quadrants.

IN MEMORIAM

William P. Broderick of Saint John, N.B., aged 79, died February 16. He was born in Fredericton and was graduated from the University of Pennsylvania, leading his class, in 1901. He practised continuously in Saint John until the time of his death.

Dr. Broderick was a gifted orator and musician. He ran for the Dominion Parliament in 1917 and 1921 on the Liberal platform but was defeated on both occasions. He was very prominent in Roman Catholic fraternal orders and other societies. Dr. Broderick is survived by one married daughter.

Maurice Kline of Edmonton, Alberta, died on February 19 following a somewhat lengthy period of ill health. He originally began the study of dentistry at Alberta University previous to a graduating class existing there. After two years he went to the Royal College of Dental Surgeons in Toronto and was graduated in 1924 and became a member of the Dominion Dental Council that same year. He returned to Edmonton and practised in that city continuously.

He was a member of the Edmonton and District Dental Society and B'Nai Brith.

Dr. Kline is survived by his widow, two sons, three brothers and one sister.

W.E.A.

A. Gordon Lough of Vancouver, B.C. died February 14. He was graduated from the Dental School of the Royal College of Dental Surgeons of Ontario. For many years he practised in Victoria, moving to Vancouver in 1945.

In the First World War he served with the Royal Flying Corps and in the Second World War with the Canadian Dental Corps.

Dr. Lough is survived by his widow, a

daughter, a son, two grandchildren, three sisters and three brothers.

Robert Angus McTavish, Toronto, Ontario died at his home on February 21. He suffered a coronary thrombosis while shovelling his sidewalk.

Mr. McTavish was Vice President of the National Refining Company and a twin brother of the late William McTavish who was President at the time of his death. The two brothers formed the Company in 1904 and had worked together over the years. Mr. J. A. McTavish who is now president of the Company is a son of the deceased.

Mr. McTavish was prominent in the Masonic Order, being a 32nd degree mason, a member of the Scottish Rite and King Solomon's Lodge. He was a member of Scarboro Golf and Country Club, the Downtown Kiwanis Club and the Granite Club. He was a member and former elder of St. George's United Church.

He is survived by two sons, one brother and two sisters.

Cornell O. Bond of Galt, Ontario died after a brief illness at his home on February 18.

Dr. Bond graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1912. On graduation he began his practice in Yorkton, Saskatchewan and after eleven years he moved to Galt where he had lived when he attended High School. In Galt he built a successful practice and the respect of his patients and colleagues alike.

Much of his leisure time was spent at his favourite sport — fishing. He was predeceased by his wife in November 1948.

Dr. Bond is survived by one sister Mrs. Margaret Brown who lives in Galt.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

AVRIL, 1950

NO 4

Cause Probable de la Carie Dentaire*

par GEORGES LEPAGE, D.D.S., Lévis

Depuis longtemps, nous entendons parler de carie dentaire, de l'état déplorable des bouches. Des statistiques effarantes démontrent que la plupart des gens en sont atteints dans des proportions allant jusqu'à 98%. La profession dentaire, les hommes de science, les chercheurs en sont alarmés et avec raison. Plus on semble chercher, plus le désarroi est grand, plus grande est la confusion. Les études fourmillent sur les causes de la carie dentaire. Pendant que les recherches se multiplient dans les cliniques et les laboratoires, sur toutes les tribunes possibles, les conférences abondent. Plus on pousse les recherches, plus on trouve de causes. Depuis la période prénatale jusqu'à l'âge adulte, les prétendus facteurs de carie et de troubles dentaires s'amoncellent d'une façon babellique. C'est presque la confusion des langues . . . autour des dents, à en juger par les résultats obtenus et, c'est le temps de le dire, que, depuis des années, la profession est sur les dents.

Influences biologiques prénatales et post-natales, grossesses répétées, état général anémique, nutrition déficiente en aliments de base, avitaminose, mode trop artificiel de se nourrir, absence presque totale de mastication, métabolisme défectueux du calcium et du phosphore, pH trop acide de l'organisme, le climat, la race, l'hérédité, l'eau, les troubles endocriniens, etc., etc., voilà toutes des

causes considérées jusqu'ici comme indirectes ou éloignées de la carie dentaire. Comme causes directes, on a évoqué la malpropreté habituelle des dents, l'abus des sucres, la malocclusion, la malposition des dents, l'hypoplasie dentaire, les fissures des sillons des dents, enfin les microbes que l'on considère comme agents directs de la carie: le lactobacille acidophile et le streptocoque acidurique.

On a voulu lutter contre ces causes multiples par des remèdes variés. A ces nombreux problèmes, on a trouvé autant de solutions apparemment adéquates. Et pourtant, les caries abondent plus que jamais. On a d'abord cru que la carie dentaire était due uniquement au manque d'hygiène, à la malpropreté habituelle des dents, aux malformations dentaires et, partant, aux causes directes et on a fondé, grâce à certains philanthropes, des cliniques, telle que la Murray and Leonie Cuggenheim Clinic de New York. On y extrayait les dents trop mauvaises, on obturait toutes les caries, on surveillait le brossage quotidien, enfin, à tous les six mois, on faisait la prophylaxie et l'examen d'usage. Quels en furent les résultats? Une faillite complète. Après dix ans d'aseptie buccale et de traitements adéquats par des cliniciens sérieux, son directeur, le Dr McCall déclarait, à sa grande déception, que l'incidence de caries de ces patients était passée de 2.3 à 4.5. D'ailleurs, messieurs, n'avez-vous

*Causerie prononcée à la Société de Stomatologie de Québec, le 19 janvier, 1949.

pas tous rencontré de ces bouches malpropres, voire répugnantes, garnies de dents exemptes de caries et, par contre, une multitude de caries récurrentes dans des bouches méticuleusement entretenues?

De toutes ces observations, nous pouvons tout au plus conclure que le manque d'aseptie ne peut que favoriser la carie, et non pas la provoquer. Il en est un adjuvant et il ne peut être ici question de cause initiale.

La malocclusion, la malposition des dents, les sillons, les fissures, peuvent certes engendrer des caries, mais ce sont là des faits accidentels, qui d'ailleurs peuvent coïncider avec la véritable cause, car nous rencontrons souvent de ces dents ainsi handicapées, mais parfaitement saines, même à un âge très avancé. Quant aux fissures dans les sillons d'émail, nombreuses sont celles qui engendrent des caries, mais que de fois n'en voyons-nous pas indemnes de caries, par suite d'une résistance de la part de la dentine, phénomène de la dentine secondaire et qui se manifeste par une simple tache ou filet brunâtre au fond d'un sillon.

Puis, les recherches ont ensuite été portées sur la probabilité des causes éloignées énumérées plus haut et qui semblent toutes se rattacher au problème de la nutrition. C'est un problème fort complexe, puisque à lui se rattachent les questions de vitamines, de calcium, de phosphore, lesquels sont soumis aux phénomènes métaboliques de l'absorption, de l'assimilation et de l'élimination.

Je n'ai pas l'intention d'étudier ce problème du point de vue scientifique et d'analyser les facteurs physico-chimiques, qui président à la nutrition. Je veux simplement traiter cette question du côté empirique, en me basant sur certaines observations personnelles. J'ai dans l'esprit le tableau du patient qui suit une diète méticuleuse, composée de lait, jus d'orange, légumes verts en feuilles, fruits frais, céréales de blé entier, huile de foie de morue, tous quotidiennement ingérés, enfin, un régime qui contient tous les éléments d'une nutrition parfaite, l'usage des sucres étant modéré. Nous examinons la bouche de ce patient régulière-

ment tous les six mois et toujours nous trouvons de nouvelles caries, à la grande déception du patient et du dentiste lui-même.

Comme vous, j'ai eu l'occasion de voir la denture de plusieurs confrères de collègue, qui avaient été pensionnaires durant 10 ans. Chez la plupart, les caries et les obturations fourmillaient dans ces bouches. Par contre, chez quelques autres, j'ai été étonné de constater une denture à peu près parfaite. L'on sait comment peut être déficiente la diète de ces maisons! Comment expliquer alors que des organismes soumis à un régime identique aient subi des effets si différents? Chez les uns, les dents ont reçu du peu de calcium et de phosphore qui se trouvait dans la nourriture une ration suffisante. Chez les autres, une ration bien insuffisante. Bien entendu, on admet que la dent reçoit du courant sanguin sa part quotidienne.

Nous pouvons faire la même observation sur l'alimentation au foyer. Nous avons tous parmi nos patients des familles entières qui viennent à notre bureau. Quelques fois, nous voyons des dentures parfaites chez la plupart des enfants, cependant que l'un d'eux déroge à ce qu'on pourrait attribuer à une loi d'hérédité et vous présente une bouche fort avariée. Une petite enquête révèle qu'il s'est alimenté de la même façon que ses frères et sœurs, l'usage du sucre étant aussi modéré chez ce dernier que chez les premiers.

Après ces observations, constatées par les savants eux-mêmes, il est évident que le facteur alimentaire est insuffisant à expliquer la carte. Passons à une autre hypothèse.

Il y eut celle des vitamines. Que penser de cette ingestion massive qu'on nous a imposée, depuis quelques années, à coups de publicité et à coups de dollars? Le bien-fondé de leur valeur est aujourd'hui bien discrédité. Elles ont d'ailleurs si peu amélioré les santés, que les savants en sont rendus à se demander si l'ère des vitamines n'est pas révolue.

Ce n'est pas tout d'absorber des vitamines, du calcium, du phosphore, enfin toute cette alimentation riche en éléments nutritifs, mais encore faut-il les assimiler;

et je crois que nous atteignons là le point névralgique de la cause de la plupart de nos troubles organiques et partant même de ceux de nos dents. Pourquoi n'assimilons-nous pas ce que nous mangeons et pourquoi ce qui a été assimilé est-il parfois détruit? La raison est que les organes qui président à cette fonction sont en hypoactivité, et ils sont en hypoactivité parce que les nerfs sympathiques et para-sympathiques qui veillent à ces fonctions sont en déséquilibre. Ce déséquilibre constitue ce que l'on appelle le "trouble psycho-somatique".

La prédominance de l'action du sympathique sur le parasympathique engendre l'acidose constitutionnel ou pH trop acide, et c'est un fait prouvé que l'acidose constitutionnel est générateur de caries. Par contre, l'alcalinose est un immunisant de celles-ci. C'est ce qui faisait dire à Mc-Donagh que les candidats à la carie dentaire sont sous l'influence marquée du sympathique.

Broderick fait des expériences avec l'insuline. Injectée en petites doses progressives, on observera que le pH de la salive était passé de 6.2 à 8.4. Après quelques semaines, les caries dentaires étaient arrêtées et les signes d'hypercalcification de la dentine apparaissaient manifestement.

En administrant l'insuline, que fait-on? On fournit un médicament qui neutralise la prédominance du sympathique sur le para-sympathique, et conséquemment, on produit l'alcalinité de la salive et l'immunité à la carie.

Que le sympathique et le para-sympathique dominant le système végétatif, c'est un fait prouvé; que le système végétatif autonome soit tenu en équilibre par le sympathique et le para-sympathique, c'est admis.

Alors, quand le sympathique préside-t-il au fonctionnement du système végétatif, pour faire déferler cette vague néfaste d'acidose dans notre organisme et aussi dans nos dents?

Le sympathique entre en jeu sous l'influence d'un trouble psychique, d'un

choc émotionnel, passager ou chronique. Et Dieu sait si notre vie moderne nous en fournit, avec son cortège d'inquiétudes et de malaises de toutes sortes.

Nous vivons dans un siècle où la peur, les phobies, la "floating anxiety", les désirs effrénés et les frustrations sont souvent notre partage. Qu'engendrent-ils? Des malaises psycho-physiques de toutes sortes que la médecine essaie en vain de conjurer. Que d'organes sains sont sacrifiés chaque jour sous la lame du bistouri ou la pince du dentiste, sous prétexte d'une douleur persistante et d'une cause douteuse. Que de toniques, de pilules et d'injections passent dans notre tract digestif sans n'y laisser aucune trace, sauf celle d'un réconfort moral de courte durée.

N'a-t-on pas démontré et prouvé que l'ulcère d'estomac est la résultante d'un trouble psychique, d'une inquiétude prolongée, d'un revers de fortune?

La ptose d'estomac et les gaz qui en résultent ne sont qu'une manifestation physique d'un trouble émotionnel à l'état endémique.

Notre digestion, messieurs, n'est-elle pas entravée et souvent arrêtée à la réception d'une nouvelle inattendue, d'une peur réelle ou imaginaire. Les fatigues chroniques, les dépressions, les hypotensions sont souvent la rançon d'une frustration sexuelle. Les maux de tête pour la plupart sont la résultante de tracasseries de toutes sortes.

Les névralgies et douleurs dentaires dont on ne trouve pas la cause trouvent souvent leur étiologie dans un trouble psychique. Une de mes patientes fut soulagée radicalement après l'avoir dirigée chez un psychiatre compétent.

Messieurs, nous constatons les découvertes de plus en plus sensationnelles que fait chaque jour la psychiatrie. Elle est en train de révolutionner toute notre médecine. Les succès éclatants des cures et des traitements appliqués peuvent presque se comparer aux découvertes de Pasteur.

Considérons toujours que l'homme est

un tout indivisible dont chaque particule est animée par un principe de vie que l'on appelle l'âme.

Pourquoi s'étonner que des organes soient troublés dans leur fonction, alors que le principe qui les anime est lui-même parasité à sa base par une foule de perturbations.

Même s'il répugné philosophiquement,

l'axiome "Mens sana in corpore sano" devrait être traduit, mais à l'inverse: "Un corps sain dans une âme saine".

Messieurs, l'hypothèse est posée: Les troubles psychiques seraient-ils la principale cause de la carie dentaire?

38, av. Bégin
Lévis.

Processus biochimique de la décoloration de la dent

Par VINCENT TREMBLAY, B.A., D.D.S. Montréal.

C'est un fait qui n'échappe à personne, qu'une dent perd parfois sa coloration naturelle, à la suite de certaines circonstances, que nous n'avons pas à étudier ici. Elle prend généralement une teinte inconstante plus foncée. Cette modification dans la distribution pigmentaire n'est qu'un signe extérieur d'un phénomène plus profond, qui se passe au niveau de la pulpe et des tubulis dentinaires. Le constituant principal de la matière vivante est de nature protéique. Les bactéries en s'infiltrant dans la pulpe, s'attaquent à la protéine de la matière vivante et lui font subir des transformations, qui sont incompatibles avec la survie de la cellule.

Les éléments entrant dans la composition de la molécule protéique sont les suivants, d'après Prinz:

	Pourcentage.
Carbone	5.0 à 55
Oxygène	20.0 à 24
Azote	15.0 à 17
Hydrogène	6.8 à 7.3
Soufre	0.3 à 0.5
Soufre et fer	traces.

Les différents états, qui accompagnent le fractionnement de cette molécule complexe en ses éléments, présentent un certain intérêt dans la chimie de la dé-

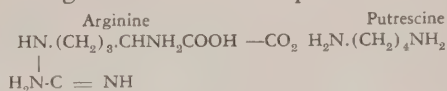
coloration de la dent. Quoique nous ne devions considérer que les produits terminaux de cette décomposition, il faut néanmoins comprendre les procédés intermédiaires. La molécule protéique peut être divisée par l'action des acides, des alcalis ou des ferments. Les ferments, dérivés de la désintégration des leucocytes ou d'origine bactérienne, tendent à liquéfier la matière protéique. Les organismes, que l'on trouve dans une pulpe gangrenée, consistent en différentes formes de streptocoques, staphylocoques, pneumocoques et bacilles. Ces organismes sont soit du type aérobique ou anaérobique. Ils entrent dans la chambre pulpaire à travers les tubulis dentinaires, pendant la décomposition du protoplasma des tubulis et infectent la pulpe, avant qu'elle ne soit exposée par la carie. A l'examen microscopique, on voit ces microorganismes remplissant les tubulis sous forme de cocci. On rencontre également des microorganismes de formes filamenteuses. Il est intéressant de noter que les microorganismes, quand ils croissent dans les tubulis, ne sont que d'une espèce déterminée, quoique des cultures prises de pulpes gangrenées révèlent une variété mélangée de microorganismes. Les poisons, qui résultent de la décomposition de la molécule pro-

téique, sont: les ptomaines, les toxines, les endotoxines, les protéines bactériennes. Les phases progressives de la décomposition des protéines ont été démontrées par Buckley, Prinz, Kendall et Wells. La première opération dans la division de la molécule protéique est une hydrolyse et une oxydation similaire à celle qui prend place dans la digestion des protéines dans l'intestin. Egalement en présence des ferments, enzymes et bactéries, la scission et la digestion de la molécule protéique se produit. Le résultat de cette hydrolyse est la formation d'albumose, peptones et polypeptides. Ensuite les acides aminés sont libérés de la molécule protéique. Plusieurs des acides aminés sont unis en chaîne dans une molécule protéique et dans la scission de la molécule, les acides aminés se séparent. Dans la phase suivante, les acides aminés sont divisés et laissent échapper NH_3 , libérant des acides gras et de l'ammoniaque. Ceci peut être illustré par le plus simple des acides aminés, le glycol ($\text{CH}_2\text{NH}_2\text{COOH}$) qui laisse son contenu d'ammoniaque et produit l'acide acétique (CH_3COOH). Les autres acides aminés donnent leur ammoniaque et laissent échapper d'autres acides gras.



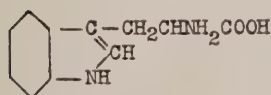
Si les acides aminés donnent CO_2 et retiennent leur contenu d'ammoniaque, le résultat est une décarboxylation. Ce procédé laisse une amine, qui est souvent une substance poison. Aussi les amines: putrescine, cadavérine sont des substances de mauvaises odeurs contenues dans toute protéine, qui se putréfie. Il est intéres-

sant de décarboxylier des substances analogues de la manière qui suit:

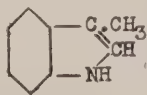


Quelques acides aminés contiennent du soufre et, dans la dissociation de leurs composés, le soufre est libéré. Une partie de celui-ci s'unit avec l'hydrogène pour former l'hydrogène sulfuré, autre produit gazeux. Quand l'anhydride carbonique s'échappe de l'acide aminé, il libère une ptomaine, un des poisons odorant de la décomposition de la molécule protéique. Mais quand l'ammoniaque s'échappe d'abord de l'acide aminé, l'acide gras demeure. En plus des ptomaines, les produits de décomposition produits sont le tryptophane, le skatol, l'indol. L'indol s'oxyde davantage et produit l'indoxyl qui se combine avec le sulfate acide de potassium pour former l'indican. Cette substance peut se décomposer davantage en indigo et peut devenir un facteur de la décoloration de la dent, puisque les bactéries agissent sur l'indican et produisent le bleu indigo. La quantité d'indican formée dans la petite quantité de protéine, qui peut être trouvée dans une pulpe, qui se décompose, semble insignifiante, et c'est un fait bien connu que la dent, dans laquelle la pulpe se putréfie, est décolorée. La dent sans pulpe est souvent référée par le public comme une dent noire et il est entièrement en dehors du contrôle du dentiste de prévenir la décoloration et de la corriger, si elle s'est produit avant le traitement de la dent.

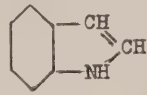
La réaction chimique de la formation de l'indican est la suivante:



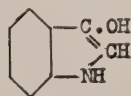
Tryptophane



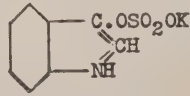
Skatol



Indol



Indoxyl

Sulfate acide
de potassium

Indican

Les produits finaux de la décomposition de la protéine incluent des substances complexes non mentionnées ici, parmi lesquelles des composés aromatiques. Les produits concernés dans le traitement des pulpes peuvent se résumer comme suit: les microorganismes, l'eau, l'ammoniaque, le gaz carbonique, l'hydrogène sulfuré, les acides gras, les ptomaines et l'indican. La décomposition du tissu pulpaire est donc la première cause de décoloration de la dent. Cependant il peut y avoir d'autres causes, comme l'emploi de l'arsenic comme moyen de dévitalisation, l'hémorragie excessive suivant la laceration de la pulpe, les médicaments et les matériaux de remplissage.

Certaines formes de décoloration sont dues à des bactéries chromogènes. Quand la décoloration est due à des sels métalliques, le blanchissage est très difficile et même impossible. Dans bien des cas, la décoloration est due à l'hémolyse des globules rouges qui laissent échapper l'hémoglobine. Celle-ci se combinant à l'hydrogène sulfuré produit par les bactéries, forme le sulfure de fer qui est de couleur noire et qui teinte la dent de cette couleur. La profondeur de la pénétration détermine également dans quelle mesure on aura du succès ou un échec dans le blanchissage. L'arsenic peut produire suffisamment de congestion de la pulpe pour causer la rupture des fins capillaires et la sortie du sang dans les tubulis dentinaires. Comme résultat de la rupture des délicats vaisseaux, l'hémoglobine et les pigments contenant du fer sont libérés et forment de nouveaux composés pigmentés, et le degré de décoloration dépend du degré de la décomposition de l'hémoglobine. Une coloration de la dent par la chambre pulpaire suivant une hémorragie profuse n'est pas

rare. Certains médicaments peuvent causer la décoloration. Les uns tachent "per se," tandis que d'autres tachent seulement en se décomposant ou en se combinant avec d'autres agents employés en traitement de canaux. Les huiles essentielles forment des substances résineuses qui décofrent la substance de la dent. Quelques médicaments tachent presque immédiatement, tandis que d'autres n'apparaissent qu'après quelques temps. Les médicaments connus qui tachent la dent sont: l'huile de cassia, l'azochloramide, l'iodoforme, le formocrésol, le nitrate d'argent, le chlorure mercurique, l'osogen, le métaphen, le merthiolate et les autres sels métalliques.

La décoloration par les matériaux de remplissage dépend de la sorte employée. L'amalgame d'argent produit une tache grise foncée, l'amalgame de cuivre, noire ou bleue noire, tandis que l'or peut se combiner avec les produits de la carie et former une tache brune foncée. Les taches métalliques sont très difficiles à enlever. Les médicaments employés dans le traitement électrolytique de l'ionisation doivent être manipulés avec soin, car ils sont une cause de décoloration de la dent. Nous savons que la dent jeune a de larges tubulis dentinaires, et une chambre pulpaire assez étendue: l'expiration de la pulpe donne lieu à une hémorragie abondante et, par conséquent, favorise la décoloration de la dent.

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PAGES EDITORIALES

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Précédent dangeureux

Les publications professionnelles, telles que la nôtre, sont écrites pour les membres de la profession et ne doivent pas être laissées entre les mains du public.

Il y a plusieurs raisons en faveur de cette discrétion et non la moindre est l'inaptitude des profanes à apprécier un écrit scientifique. La plupart des revues indiquent bien qu'elles laissent aux auteurs seuls la responsabilité de leurs communications et les opinions émises par eux ne reflètent en rien la politique générale du corps professionnel concerné. Un journal professionnel est susceptible de contenir, dans une même livraison, deux articles offrant des solutions opposées pour un même problème. Les initiés — disons les dentistes — peuvent comprendre les données du dilemme et discerner le bien-fondé des recommandations suggérées; mais les non-initiés — disons les patients — n'y voient que du feu et sont parfois scandalisés de cette division apparente des concepts professionnels sur une question. D'où une série interminable de demandes de renseignements et parfois des doutes sur la compétence et le sérieux d'un praticien, parce que les bases nécessaires à une compréhension totale manquent.

Il peut arriver aussi qu'une histoire de cas, son traitement, ses résultats, soit rapportée, par un confrère dans une livraison de périodique dentaire; des photographies du patient traité peuvent être jointes à l'article; ce patient a pu souffrir de maladies constitutionnelles, seules connues de son médecin et de son dentiste.

On peut juger de la surprise qu'éprouverait une personne connaissant ce patient, en apprenant ces détails dans les pages d'une revue dentaire, et de la répercussion possible de ces découvertes au point de vue social et familial.

Ce cas peut se présenter et serait une cause d'ennuis assez sérieux pour tous ceux que l'article touche.

On a vu récemment des articles pseudo-scientifiques, publiés dans les revues
Jour. A.D.C., avril, 1950

profanes, laisser une fausse impression dans le public au sujet de l'emploi du fluorure de sodium. L'Association Dentaire Canadienne a tenu, dans le temps, à rectifier les allégues de ces vulgarisateurs, qui, par l'usage d'expressions vagues et trompeuses, opinaient que l'utilisation du fluor abolissait toute carie dentaire.

On peut voir comment des notions scientifiques mal comprises peuvent être la source de conceptions fautives.

Il vaut donc mieux que nos revues professionnelles soient laissées dans nos bibliothèques ou nos cabinets particuliers; elles ne sont pas faites pour nos patients, qui ne peuvent les comprendre à fond; leur place n'est pas dans nos salles d'attente.

Gardons donc nos revues pour nous et mettons entre les mains de nos patients des traités de vulgarisation, revus et corrigés par nos corps professionnels.

Gérard de Montigny.

Dans le monde dentaire

Résolution du Collège de la Province de Québec.

"J'ai le plaisir de vous informer qu'à la dernière réunion du Bureau des Gouverneurs du Collège des Chirugiens-Dentistes de la Province de Québec, tenue le 16 décembre 1949, il a été unanimement résolu qu'à partir du 1er janvier 1951 le Collège paiera à l'Association Dentaire Canadienne la somme de \$15.00, par membre en règle avec le dit Collège."

"J'ai l'honneur de vous annoncer qu'à la dernière réunion du Bureau des Gouverneurs, tenue le 16 décembre 1949, il a été unanimement résolu d'inviter officiellement l'Association Dentaire Canadienne à tenir sa réunion annuelle dans la Province de Québec, la date et le lieu devant être fixés plus tard."

"Au cours de cette dernière réunion, j'ai reçu ordre de transmettre à l'Association Dentaire Canadienne les remerciements sincères du Collège pour l'initiative, qu'elle a eue, d'envoyer à tous les membres un résumé des délibérations de l'Association."

Enoncé du Collège d'Alberta.

"A une réunion du Collège de la Province d'Alberta, la question de l'octroi annuel à l'A.D.C. fut étudiée avec soin. Le Bureau était d'avis qu'il était impérieux d'augmenter le plus possible cet octroi à l'Association, puisque le Bureau, par une résolution passée en 1948, avait décidé que l'Association ne pouvait opérer convenablement au bénéfice de la profession, ni se constituer un fonds de

réserve convenable, à moins que l'octroi ne s'élève immédiatement à \$25.00, par membre, par année. Le fait que la Province du Manitoba augmentait immédiatement sa cotisation à \$25.00, par membre, à partir de 1949, plaçait notre Bureau dans une obligation de faire la même chose. Cependant, comme notre Loi limite notre cotisation annuelle totale à \$35.00 et comme la cotisation pour 1949 avait déjà été fixée, en 1948, et déjà payée par nos membres, il nous était impossible de dépasser \$10.00, pour cette année. Un chèque, dont le montant fut calculé sur cette base, vous est parvenu.

Pour 1950, toutefois, la cotisation pourrait être augmentée au maximum prévu par la Loi, c.-à-d. \$35.00; avec cette latitude, notre Bureau a passé la résolution suivante:

"Le Bureau regrette son incapacité à suivre le splendide exemple donné par le Province du Manitoba, en augmentant son support financier à notre organisation nationale, dès maintenant.

"Le Bureau fixe sa cotisation à l'A.D.C., pour 1949, à \$10.00, par membre.

"Pour 1950, la cotisation des membres d'Alberta à l'A.D.C. sera calculé à raison de \$25.00, par membre.

"Le secrétaire est prié de transmettre ces nouvelles au secrétaire de l'A.D.C., en lui fournissant ces explications."

Le plan de santé d'Angleterre.

Il s'est écoulé assez de temps depuis la mise en opération du plan de santé anglais pour nous permettre une évaluation de son

rendement. Une série de courts articles, traitant de cette question, paraîtra dans les Lettres aux Gouverneurs, expliquant les résultats de cette mesure gouvernementale.

On lira plus bas un bref résumé de la première année de la mise en force de ce plan et de ses résultats dans le service dentaire. D'autres articles traitant de la liberté du professionnel, du financement de cette organisation, de la discipline, etc., seront publiés prochainement.

Loi du Service National de Santé lière année d'opération—Dentisterie

Note—Ce plan fut mis en force contre le gré de la profession.

Faits—1) Un plus grand nombre de citoyens reçut des traitements dentaires que jamais auparavant.

2) Un grand nombre de dentistes reçurent des honoraires plus élevés que jamais auparavant.

Observations

1) La demande de services dentaires fut telle que les dentistes durent travailler des heures plus longues et leur santé s'en est ressentie.

2) Les dentistes ne purent donner la qualité des services du passé; l'appréciation du public pour les cabinets dentaires a donc diminuée.

3) Les dentistes, qui ont tenté de maintenir le standard habituel de leur travail, ont remarqué une diminution de leur revenu.

4) Si un patient régulier doit attendre son tour, ce patient est perdu pour le den-

tiste. Si ce patient est traité avant les autres, le dentiste est accusé d'accepter des pots-de-vins pour passer des patients avant les autres.

5) Le dentiste habitué à une pratique "à la chaîne" trouve la loi excellente. Les extractions en masse et la confection de prothèses sont approuvées sans enquête.

6) Le dentiste de classes moyennes, pour la première fois, a pu faire du travail pour une échelle d'honoraires fixe. Ses tracas commencent quand il demande la permission d'exécuter du travail un peu spécial et qu'il doit attendre indéfiniment pour la réponse. Le dentiste, qui veut faire profiter son patient de sa formation plus poussée, a les mains liées. Les dentistes se rendent compte qu'il est presque inutile de demander l'autorisation de donner des traitements spéciaux et évitent une correspondance interminable en prenant la voie la plus facile.

7) Les services dentaires dans les écoles est tout désorganisé à cause des inconvénients de la loi, qui n'a pas prévu cette question.

8) Dentistes—Insécurité.

a) La note évidente de cette organisation pour l'avenir est uniquement basée sur l'économie.

b) Il est évident que le seul remède du Ministre repose sur la diminution des honoraires et que les décisions du Ministre sont sans appel.

c) Une baisse des honoraires veut dire une baisse du standard des services.

Liste des cours postsecondaires qui auront lieu à la Faculté de chirurgie dentaire d'ici à la fin de l'année universitaire 1949-1950

Prothèse, du 6 au 11 mars (journées complètes)

Chirurgie et anesthésie, les 6, 7, 9, 14, 15 et 16 mars (demi-journées)

Diagnostic, du 13 au 18 mars (journées complètes)

Pédodontie, les 11, 12, 13 et 14 avril (journées complètes)

Chirurgie et anesthésie, du 24 au 29 avril (journées complètes)

Endodontie, les 9, 16 et 23 mai 1950 (journées complètes)

Pour renseignements, écrire au doyen de la Faculté de chirurgie dentaire, 2900, boulevard du Mont-Royal, Montréal 26.

Statistiques sur le nombre de dentistes au Canada

Des renseignements sur la profession dentaire canadienne sont compilés dans des tableaux, reproduits ci-bas. La province de Terre-Neuve est incluse dans ces relevés, pour la première fois.

Le tableau No 1 montre une augmentation de 78 dentistes sur le nombre total de l'an passé. L'année 1938 est utilisée depuis quelques années comme point de comparaison. Il y a 453 dentistes de plus qu'en 1938, au Canada.

La comparaison des proportions de dentistes en rapport de la population indique que la situation s'est empirée partout, excepté pour les provinces de Québec, de l'Alberta et de la Saskatchewan. L'augmentation générale de la population, ces dernières années, est le facteur responsable pour cet état de choses.

Toute prédiction pour l'avenir est dangereuse. On ne peut prévoir une augmentation de la population. Toutefois, on estime un accroissement de la population pour les années, qui viennent. On peut faire certaines observations au sujet des disponibilités de la profession den-

taire. Les années 1950 et 1951 devraient montrer une augmentation du nombre total des dentistes, due à deux classes nombreuses d'après-guerre dans les Ecoles dentaires. Après ces années, les élèves reprendront leur nombre normal.

Une étude attentive des âges des dentistes indique que les pertes par mortalité ou retraite augmenteront dans les prochaines années. Le pourcentage des dentistes canadiens, qui ont dépassé l'âge de 50 ans, est élevé. Un état d'urgence, tel qu'il s'en est produit un, en 1939, présenterait une situation bien différente tant qu'à la disponibilité de personnel dentaire. Cet état de choses peut être imputé au fait que, de 1920 à 1928, il y eut des additions considérables au nombre de dentistes canadiens, tandis que, de 1929 à 1940, il y eut beaucoup moins de dentistes diplômés.

Comme on peut le voir dans le Tableau No 2, les déplacements des dentistes fut à peu près nul. Le total des spécialistes (Tableau No 3) est monté de 2, en supplément de celui rapporté l'année précédente.

TABLEAU NO 1

Statistiques de la profession dentaire du Canada rapportées par les Régistres provinciaux en janvier 1950

Province	Nombre de Dentistes			Durant 1949			Accroissement ou Décroissement	Proportion du Nombre Total des Dentistes en Rapport Avec la Population
	Hommes	Femmes	Total	Morts	Retraites	Additions		
T.-Neuve.....	19	0	19	1	0	3	—	1/17895
I. du P.-E.....	29	0	29	0	0	0	-1	1/3241
N.-E.....	170	1	171	7	3	9	+2	1/3772
N.-B.....	105	0	105	3	0	5	-5	1/4914
Québec.....	1085	5	1090	12	12	59	+216	1/3566
Ontario.....	1972	23	1995	35	13	60	+63	1/2211
Manitoba.....	239	1	240	3	3	10	-11	1/3242
Sask.....	206	3	209	6	3	20	-1	1/4120
Alberta.....	282	1	283	1	1	19	+47	1/3078
C.-B.....	483	3	486	7	2	30	+124	1/2292
Totaux.....	4590	37	4627	75	37	215	+453	1/3002

Les chiffres des populations soumis dans ce tableau sont ceux publiés par le Bureau Fédéral des Statistiques, en Juin 1949, incluant Terre-Neuve, dont la population est estimée à 340,000.

*Les chiffres des accroissements ou des décroissements, comparés à l'année d'avant-guerre 1938, sont donnés pour des fins de comparaisons.

TABLEAU NO 2

Migration des Dentistes Canadiens durant 1949

A:—	T.-N.	I. du P.-E.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.-B.	E.-U.
DE:											
T.-N.	0	0	0	0	0	0	0	0	0	0	0
I. du P.-E.	0	0	0	0	0	0	0	0	0	0	0
N.-E.	0	0	0	0	0	0	0	0	0	0	0
N.-B.	0	0	0	0	0	1	0	0	0	0	0
Québec	0	0	0	0	0	0	0	0	0	0	0
Ontario	1	0	0	0	0	0	0	0	0	0	0
Manitoba	0	0	0	0	0	0	0	0	0	0	0
Sask.	0	0	0	0	0	0	1	0	2	1	0
Alberta	0	0	0	0	0	1	0	2	0	1	1
C.-B.	0	0	0	0	0	1	1	0	0	0	3

TABLEAU NO 3

Nombre de Spécialistes, par Province
(Seulement ceux, qui pratiquent leur spécialité, plein-temps)

	T.-N.	I. du P.-E.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.-B.	Totaux
Chirurgie (Exodontie)....	0	0	1	0	3	24	3	0	1	3	35
Orthodontie.....	0	0	1	0	13	23	2	0	2	7	48
Periodontie.....	0	0	0	0	2	13	1	0	1	3	20
Pedodontie.....	0	0	0	0	0	2	1	0	0	3	6
Totaux.....	0	0	2	0	18	62	7	0	4	16	109

TABLEAU NO 4

Nombre de dentistes employés dans des services de santé par Provinces

	T.-N.	I. du P.-E.	N.-E.	N.-B.	Qué.	Ont.	Man.	Sask.	Alb.	C.-B.	Totaux
Ecoles Dentaires: (Personnel Enseignant)											
Plein-Temps...	0	0	2	0	8	9	0	0	1	0	20
Demi-Temps...	0	0	0	0	15	7	0	0	7	0	29
Service Hospitalier											
Plein-Temps...	2	0	0	0	0	18	0	2	0	1	23
Demi-Temps...	0	0	0	0	0	5	0	0	0	1	6
Service Dentaire Scolaire											
Plein-Temps...	0	0	1	0	8	12	1	0	3	10	35
Demi-Temps...	0	0	2	2	0	49	3	1	2	3	62
Service de Santé Publique											
Plein-Temps...	0	0	1	1	8	11	1	1	2	2	27
Demi-Temps...	1	0	0	0	6	0	1	0	0	0	7

TABLEAU NO 5

Nombre total de dentistes employés par le Gouvernement Fédéral au 1er janvier 1950

Ministère des affaires des Vétérans.....	48
Ministère de la Défense Nationale.....	79
Ministère de la Santé Nationale et du Bien-Etre Social...	5

CONGRES NATIONAL de L'ASSOCIATION DENTAIRE CANADIENNE

LES 14, 15, 16, 17 MAI 1950

à l'Hôtel Royal York, Toronto

Conférenciers:

- Drs L. S. Fosdick, Chicago "Le contrôle de la carie dentaire".
 Herman Becks, San Francisco "Elaboration et maintien de la santé des organes buccaux".
 John Thompson, Chicago "Les bases physiologiques de l'occlusion".

Cliniciens: (cliniques répétées)

- Drs E. Romly Romine "Préservation des structures buccales au cours des opérations".
 Victor L. Stoffel "Prothèse partielle et ses exigences".
 Felix French "Occlusion dentaire".
 A. Douglas Richardson "L'endodontie au service du praticien".
 H. M. Worth "Etudes sur la radiographie dentaire".
 J. Arthur Renaud "L'amalgame et son évolution".
 Gerald Racey "Le diagnostic au service du praticien".
 W. Scott Hamilton "Chirurgie buccale".
 Robert E. Moyers "Diagnostic et pronostic des cas en orthodontie".
 Ed. Bilkey "Appareils de maintien".
 Corps Royal Dental Canadien "Examen et organisation du traitement recommandé par le C.R.D.C.".

Orateurs aux dîners:

- M. John Fisher "Soixante-quinze ans d'éducation dentaire, au Canada".
 Dr Harvey Reid "L'assurance-santé et ses rapports avec la profession dentaire".

Evènements spéciaux

- Concours de photographies. Les membres de la profession sont invités à soumettre des photographies prises par eux-mêmes.
- Série de démonstrations données par le personnel enseignant de la Faculté Dentaire de l'Université de Toronto.
- Excursion aux chutes Niagara, Jeudi p.m. Prix: \$6.00, comprenant le transport en autobus et le dîner à l'Hôtel Brock.
- Programme pour les dames. Souper, lundi; dîner, mardi. Excursions au James Estate Garden, Guild Inn et dans l'Hôtel Royal York.
- Danse, mardi soir.
- Les repas de lundi et mercredi seront préparés par des diéticiens et ne contiendront qu'un minimum d'hydro-carbonés. Illustration d'une diète balancée.
- Dimanche soir, concert offert par des artistes de la section d'Opera du Conservatoire Royal de Musique, dans la salle de concert de l'Hôtel.
- Des films scientifiques seront projetés, tous les jours, durant deux heures. Ces films traiteront de sujets pratiques.

Frais d'inscription: \$15.00

RENDONS-NOUS A NOTRE CONGRES NATIONAL!



Ruggles Photo—Courtesy of the Newfoundland Tourist Office.

NEWFOUNDLAND PARLIAMENT BLDGS.

Delegates attending from Newfoundland will receive a warm welcome at the Joint Meeting of the Canadian Dental Association and the Ontario Dental Association.



Courtesy of Travel & Publicity Province of Ontario.

ONTARIO PARLIAMENT BLDGS.

The Hosts of the combined meeting of the Canadian Dental Association and the Ontario Dental Association assure the out of the Province delegates a real welcome at the forthcoming convention.

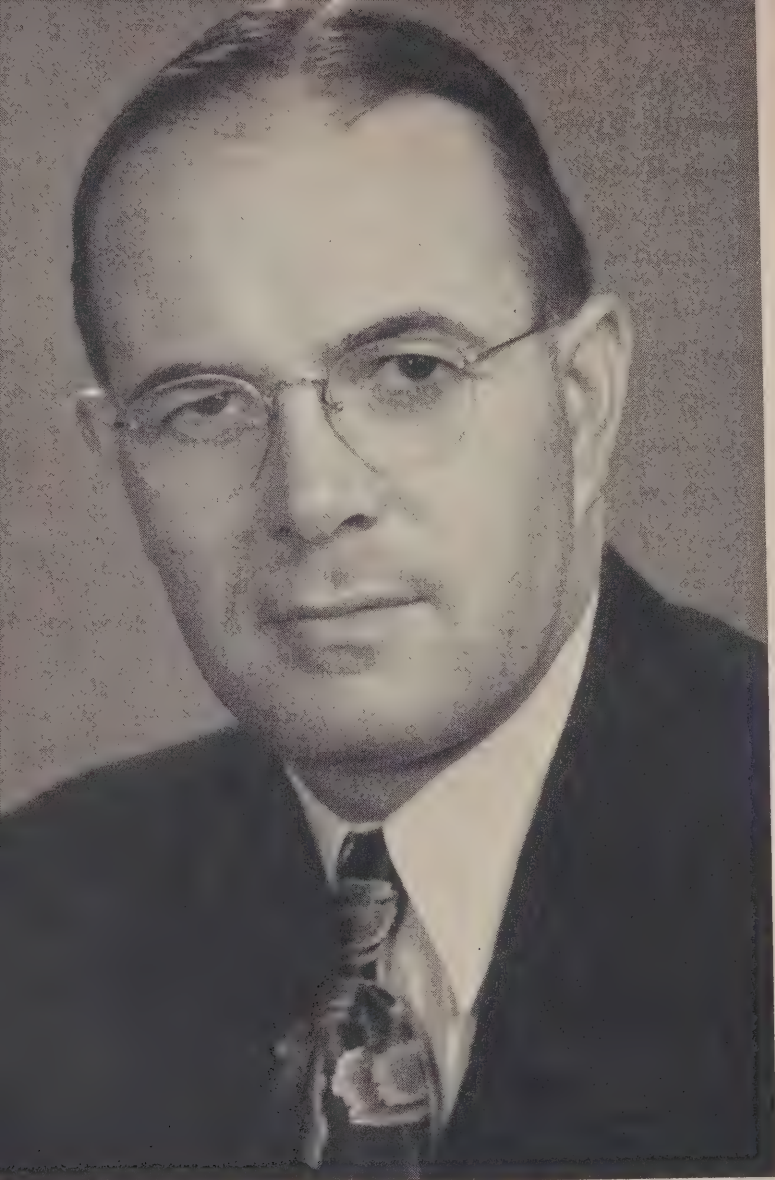


Photo by Dodge, Halifax.

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Clinical Examiner for Dominion Dental Council.

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, MAY, 1950

No. 5

A REVIEW OF THE PATHOLOGY OF ORAL EPITHELIAL TUMOURS

by ALEXANDER G. NUTLAY, M.D., D.D.S.* and J. WILLIAM ABBISS, M.B., C.H.B.†
Halifax, Nova Scotia

THERE are three branches of modern dental science which because of their confused definitions and aims find little favour with the majority of the dental profession. They are oral and dental embryology, oral and dental histology, and laboratory procedures employed as aids in making a diagnosis of oral or dental disease. It is true that dental literature on these subjects is extremely meagre in spite of articles relating to them which have recently appeared in oral periodicals. It is the object of this paper to discuss oral tumours of epithelial origin in the light of these three branches of dental science.

In general, a tumour or neoplasm may be described as an uncontrolled new growth of tissue, not integrated in the functional organization of the host's body, and not serving any useful purpose.¹ The two main points of this definition deserve emphasis, namely, new growth of cells without controlling influence, and lack of any useful purpose on the part of these cells.

As a rule tumours are easy to recognize, but many tumour-like formations exist which because of their form and

activity are only differentiated with difficulty from true tumours. Examples are furnished by the hyperplasia which sometimes occurs as the result of inflammation, and by that type of granulation tissue which resembles a sarcoma.

Apart from clinical examination the two conditions, tumour formation, and inflammatory reaction, may be distinguished by laboratory study. In an inflammatory swelling, and the word tumour is purposely omitted, the causative organisms of the condition may be seen in smear preparations, or grown in cultures prepared from the lesion, and a histological diagnosis made by study of sections of biopsy material. Similarly, the diagnosis of a true tumour may be made from its histological characteristics, and further classified according to its origin from epithelial or connective tissue elements.

Sometimes, however, the distinction between the two types of lesion is not clear cut when microscopic study is made, since certain inflammatory reactions appear to blend almost imperceptibly with tumour formation, and

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This publication was made possible in part by a research grant of the National Research Council, Ottawa. The biopsy materials of the adamantinoma and follicular cysts were obtained through the courtesy of Dr. O. L. Croft, Professor of Oral Surgery and Anaesthesia at the Dental Faculty of Dalhousie University. The microscopic slides and photomicrographs were prepared at the Pathological Institute of Nova Scotia, Halifax, N.S.

the histological picture in such cases closely resembles that of some tumours. An example is seen in the case of granulation tissue formed in an attempt to repair tissue injury. Here there is intense activity on the part of the cells of the newly-formed tissue, these cells proliferating rapidly, and whilst such growth is usually orderly, occasionally it may become so exuberant that it may be difficult to distinguish from true tumour formation. Such overgrowths of reparative tissue have been called wild flesh, or "caro luxurians" by Ribbert in his textbook of Pathological Anatomy, and he has suggested that such tissue is akin to tumour formation. Axhausen, however, recently took exception to this view, and has asserted that the overgrowth of tissue is essentially a hyperplasia of the granulation tissue, and as such is influenced by its environment, which would not occur if we were dealing with a true example of tumour formation.

EXAMPLES OF NEOPLASTIC GROWTH

At this point attention is called to the following photomicrographs illustrating some examples of neoplastic growth. The first figure is that of a squamous papilloma, which may arise from the skin or from mucous membrane which is lined by squamous epithelium. *Fig. 1.* Here one may note the long downward projections of the epithelial rete pegs, the scarcity of connective tissue and the infiltration of lymphocytes around the deeper epi-

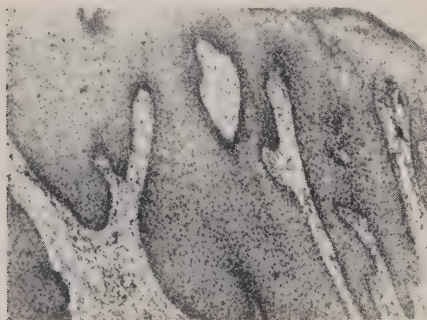


FIG. No. 1. Squamous Papilloma. x50 diam.

thelial projections. These latter cells are sometimes known as "small round cells".² Under high power it would be possible to make out a basal layer of cuboidal cells limiting the papillae, and beneath these cells a fine basement membrane marking them off from the underlying connective tissues. This limitation of the epithelium is quite marked, and in addition no mitotic figures are visible, thus suggesting that the condition is a benign one. Clinically, squamous papillomata may be divided into soft and hard varieties, and this differentiation may also be made histologically, since the hard type has a heavily keratinized surface, which is absent in the soft variety, and the latter is usually pedunculated, or has a villous appearance in addition. The second figure is that of an adenoma of the bowel. *Fig. 2.*

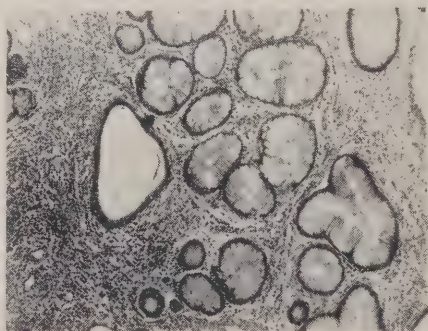


FIG. No. 2. Adenoma of Bowel. x75 diam.

Here the appearance is that of glandular tissue embedded in a connective tissue matrix, and again the cuboidal and columnar cells which make up the acini have a clearly demarcated basement membrane which limits them from the connective tissue. No mitotic figures are to be seen.

The third figure illustrates some of the features to be seen in a malignant type of tumour, *Fig. 3.* Two different terms are used in referring to this type of growth, which is a malignant tumour of squamous epithelium. The older term used for this tumour was that of squamous epithelioma, but

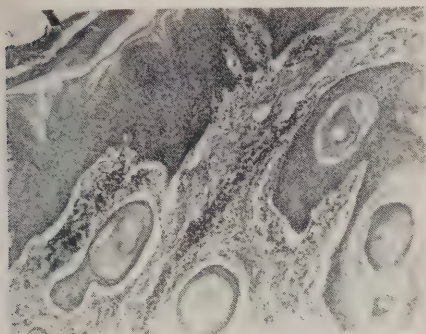


FIG. No. 3. *Epidermoid Carcinoma.* x50 diam.

it is more usual now to refer to it by the term "epidermoid carcinoma". Thoma³ retains the former term for a variety of adamantoblastoma. The appearances of this section should be compared with those of the squamous papilloma seen in figure one. The malignant tumour has lost all semblance of regular, orderly growth, and the epithelial cells are proliferating wildly into the deeper tissues. Here and there small rounded collections of cells with a keratinized central area may be seen, and these are the so-called epithelial pearls which are a frequent feature in this type of neoplasm. Examination under high power would show many mitotic figures. In this tumour there is also a marked infiltration of the small round cells around the proliferating and invading epithelial cells. Whether this represents an attempt on the part of the tissues to resist the invasion is not definitely known, though the appearances are somewhat similar to those seen in some chronic inflammatory processes.

The photomicrographs considered so far have all been those of true tumours. The next figure illustrates a different formation of new tissue, that which is seen in reparative processes, and which is known as granulation tissue. *Fig. 4.* Here, one may see a marked proliferation of capillary blood vessels, fibroblasts which will later form fibrocytes, and numerous lymphocytes and plasma cells. Occasionally,

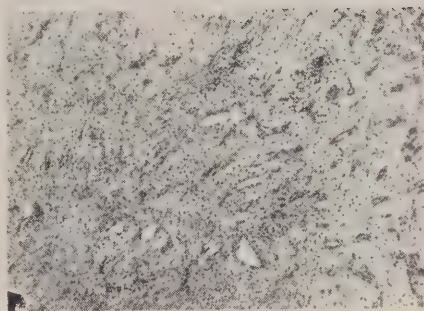


FIG. No. 4. *Granulation Tissue.* x50 diam.

giant cells may be seen in granulation tissue, and these cells are often in close relationship to blood vessels, which has led Lubarsch to suggest that capillaries may be formed by giant cell growth and canalization.⁴ Although not noticeable in the present example, mitotic figures are sometimes observed in granulation tissue, and this may be one of the features that make differentiation between true tumour formation and that of reparative tissue difficult in some cases.

From this it may be seen that there is a borderland where reparative tissue may merge imperceptibly into neoplastic growth, consequently any granulation should be looked upon as a possible source of neoplastic activity. Thus we can see that a tumour may develop from reparative tissues that arise as the result of trauma, whether such trauma be chemical, thermal, electrical, or radiological in origin, and also in chronic inflammatory tissue which shows little tendency to heal. In all these instances, however, it is likely that the affected person also has some as yet unknown, but possibly inherited, predisposing factor.

Tumours originating in granulation tissue differ from those that arise as tumours from the outset in that the former do at least commence as a useful type of tissue having a definite purpose, that of repairing some damage inflicted on the organism, whereas the latter are apparently useless from the outset. Rindfleisch reflecting on this differentiation has defined true

tumours as degenerative growth excess, and granulation tissue growths as regenerative growth excess.⁵

MEANS OF DIAGNOSIS

Following this brief general discussion it may be well to consider the various means by which a diagnosis may be made in the case of oral tumours. There are five main steps in arriving at a diagnosis, 1) history, 2) clinical examination, including inspection, palpation, and percussion, 3) biopsy for histological study, 4) bacteriological and serological procedures, 5) radiology. It is not within the scope of this paper to discuss these various methods, but attention is drawn to the value of tissue biopsy. By this method a portion of the tissue under examination is removed and subjected to histological examination which usually gives a decisive answer, and here may be mentioned the desirability of submitting any oral tissues removed at operation, to the pathologist for examination, whether such tissues comprises the whole or only part of a diseased organ.

Tumours may be classified according to their tissue origin, as either of epithelial or connective tissue type, or according to their embryonic state, as ripe or unripe growths. Oral tumours may be distinguished from each other according to their origin and position, thus odontogenic, osteogenic, non-odontogenic, non-osteogenic, and soft tissue tumours may be recognized. Tumours of bones are often referred to as central tumours, whilst those of the soft tissues are called peripheral in type. In the former radiological methods may be essential in establishing a diagnosis, but histological examination finally proves it. In the second case, (peripheral tumours), radiological methods have little use in diagnosis, except in the case of malignant soft tissue tumour which has commenced to invade bony tissues around the oral cavity, and the principal means of diagnosis is by way of histological study.

A few central tumours of dental

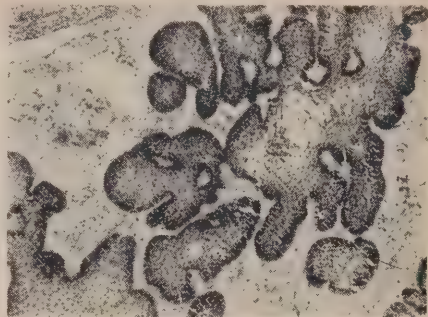


FIG. No. 5. Adamantinoma. x50 diam.

origin may now be discussed. Figure No. 5 is that of an adamantinoma, or adamantoblastoma according to Thoma's classification, an epithelial tumour whose origin has been much discussed. One suggestion is that it arises from the epithelium of the enamel organ, whilst another is that it arises from primitive oral epithelium. Zegarelli, following experimental work on rats suggests that dentigerous cysts are simply a stage in the formation of an adamantinoma, and he supports Hauerstein in the view that odontogenic cysts and adamantinomas arise from the primitive oral epithelium. On the other hand, Thoma and Proctor have advanced the theory that the epithelial linings of follicular cysts may be the source of adamantinomas.

Attention is drawn to the photomicrograph of an adamantinoma. The main part of the tissue consists of epithelium lying in a scanty connective tissue framework. The epithelial cells consist of columns and aggregations which are in various stages of differentiation, most of them here are solid nests of cuboidal cells, though in one part there is central degeneration with commencing formation of a cystic cavity. Careful study shows that some of the cells resemble those of the enamel pulp, whilst others resemble ameloblasts, but it may be mentioned that enamel formation has not been observed in these tumours, though on occasion the outer surface of some cells may be coated with a layer of hyaline stromal material. There is a

distinct resemblance to the basal cell layer of ordinary squamous epithelium, and in addition some of the cells are connected to each other by inter-cellular bridges, and these are known as prickle cells, which again are cells seen ordinarily in the epidermis. These features suggest that the adamantinoma is of epidermal origin.

It is interesting to note that in 1914 the British Dental Association appointed a committee of three, Gabell, James and Payne, to enquire into the question of classification of odontogenic tumours. In their report this committee classify cysts under the following headings, 1) multilocular cysts, 2) dentigerous cysts, 3) dental cysts. There is no mention of adamantinomas or of any growth arising from odontogenic epithelial cell elements and it is possible that the committee regarded tumours arising from such elements as separate entities. Following their descriptions, however, it seems possible that the first group, that of multilocular cysts, might include what is now known as adamantinoma, and accordingly the solid type of such a growth might be regarded as a transitional non-cystic phase in the development of a multilocular cyst. Discussing odontomas, the committee regarded them as being of epithelial origin, and existing in a follicular or a cystic follicular form. Only the compound composite, and complex composite odontomas are those odontogenic tumours which they consider to be mixed in tissue origin. At the present time it is usual to classify odontomas with the mesenchymal odontogenic tumours, but in their simpler forms they may consist entirely of epithelial cells.

The next two figures illustrate cystic tumours of a different type. Figure No. 6 is that of a follicular cyst, and here the cyst wall is composed of epithelial cells arranged in varying numbers of layers, whilst the cyst cavity contains degenerating epithelial cells, cell debris, and crystals of cholesterol. There is no evidence of the presence of a dental lamina or of a dental

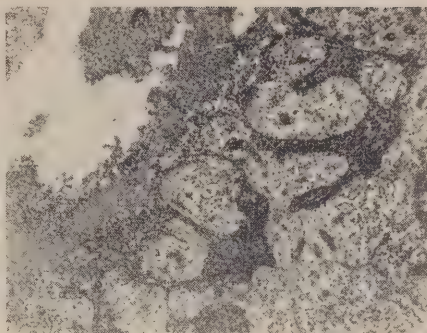


FIG. No. 6. Follicular Cyst. $\times 50$ diam.

organ, nor can an unerupted tooth be seen, and as pointed out by Gabell, James and Payne, this lack of differentiated pre-dental tissues is of importance in enabling the period of origin of the cyst to be placed in the period of existence of the enamel organ. It will be noted that scattered throughout the cyst wall there are chronic inflammatory cells, and this almost constant feature has given rise to the theory that inflammation may play a part in the causation of this type of cyst. Bloch-Jørgensen of Copenhagen has stated that examination of his material consisting of resected follicular cysts, shows an almost stereotyped histological picture. According to him such cysts consist of a wall of granulation tissue which is infiltrated by chronic inflammatory cells, whilst the lining is made up of fibrous tissue, no epithelial tissues being found. Such cysts are said by him to arise as a result of a chronic inflammatory reaction around the apex of a deciduous tooth, and he states further that in almost every case of a follicular cyst there is direct contact between it and a necrotic deciduous tooth or the remnants of such a tooth. In this particular explanation we have an example of inflammation being advanced as an exclusive cause of tumour formation. The shortcomings of this theory are many, and one of these is the fact that on occasion follicular cysts may develop at the site of a third molar tooth, which has no deciduous pre-

decessor. Worman of Minneapolis also believes that these cysts may arise as a result of inflammatory stimulation, but his explanation of the process is a different one. This observer states that the first event is the formation of inflammatory tissue which eventually becomes necrotic, liquefies, and gives rise to toxic products. This toxic material then stimulates any squamous epithelium in the vicinity, and proliferation ensues, with subsequent walling-off of the fluid-filled space from the rest of the tissues around. The end result is a cyst lined by epithelium, and having fluid contents. Another view, advanced by Lartschneider, supposes follicular cyst formation is a feature of the permanent tooth. According to this theory, union of the inner and outer enamel epithelium, which normally was degenerated by the time of eruption leaving only the enamel cuticle of the crown, is prevented by toxic products derived from necrotic deciduous teeth, and these epithelial layers are lifted up from the developing crown with formation of a cyst. Here too, inflammation plays some part in the process.

Other observers, including Falkson, Bryk and Bland-Sutton, have suggested that irregularities in the developing epithelial elements of the teeth are responsible for the formation of cysts, and emphasize that a follicular cyst should be regarded as an odontogenic tumour, whilst Sprawson, though agreeing with this classification, suggests that the stimulus responsible for the irregular development, may be of a chemical or toxic nature.

Figure No. 7 is that of a radicular cyst, sometimes referred to as a dental root cyst, and here the wall is made up of tissue which closely resembles granulation tissue. In fact differentiation may be impossible, though in some cases the relative absence of fibrillar elements, as compared with their frequency in true granulation tissue, may

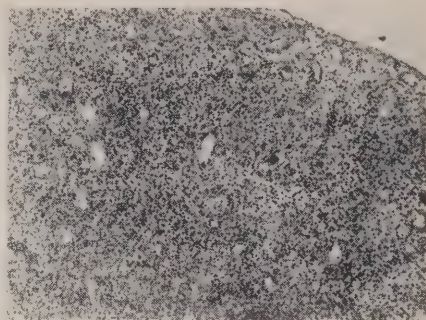


FIG. No. 7. Radicular Cyst. $\times 50$ diam.

enable a true diagnosis of radicular cyst to be made.

Figi and Stafne in 1938 reported a case of a dentigerous cyst which was made up of vascular tissue and what appeared to be glandular acini, though the cells did not appear to be secretory. Though the picture was that of glandular tissue it is probable that vacuolization of epithelial strands resulted in the histological feature described, since the cyst could not be truly adenomatous when of odontogenic character.

The odontogenic tumours appear to develop only in that period of life when the dental lamina still persists, and after the eruption of all the regular teeth the appearance of such tumours is improbable, unless associated with a supernumerary tooth. Though these tumours are not malignant they are prone to recur locally following removal, and tumours having somewhat similar characteristics may be found in the ovary, and here too, such tumours are probably of embryonic origin.

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USE OF "FAST-CURING" ACRYLIC MATERIAL IN OPERATIVE DENTISTRY

by VINCENT TREMBLAY, D.D.S., Ann Arbor, Michigan

COMPOSITION

THE new "fast-curing" acrylic material is a result of the development of a German resinous material Palapont S.H. which is described in the Fiat¹ Final Report 1185, Recent German Developments in the Field of Denture Resins. (Department of Commerce, Washington, D.C.) When you add 1% benzoyl peroxide to the powder and 0.5 to 3% of tertiary amine n-trihexyl amine to the ordinary dental acrylic liquid, and mix the powder and liquid in the usual manner, the mass will cure spontaneously. This reduces the critical polymerization temperature. 65 to 75% of the curing will be done at the end of the minute. Introduction in England of a superfine precipitated polymer with average size of 1/2000-inch renders it possible to spatulate it with the monomer on the ordinary slab. 1% of benzoyl peroxide was added as a catalyst to the methyl methacrylate polymer (powder), and 0.5 to 3% of tertiary amine was added as an activator to the liquid monomer. The polymerization is not dependent on the rate of heating: it is entirely spontaneous, being induced by the catalytic action of the benzoyl peroxide, which in turn is activated by the tertiary amine.

FIELD OF USAGE

Numerous claims are made by the manufacturers for the serviceability and application of these new resins although all claims are based on service of only a few months. They are presented as being suitable for a widespread usage²: 1—Restorations involving any or all surfaces of the teeth such as cervical, occlusals, mesials or distals, mesioclusals, mesioclusodistal, et cetera. 2—Plastic inlays by indirect method. Undercuts then were prepared in the cavity and the inlay

cemented with the same shade of this plastic material which formed a bond with the inlay and was locked in by means of the undercuts. 3—Facings on inlays, cast crown or bridges. 4—Jacket crowns either direct or indirect. Use of the same material and shade for cementation instead of other types of cements. 5—Windows in metal restorations. 6—Acrylic bridges or repair (either in or out of the mouth). 7—Cementing inlays, crowns or bridges. 9—Broken teeth from dentures or bridges. 10—Construction of small splints in the mouth. 11—Bite opening restorations. 12—Building up worn down restorations by addition of self-curing resins.

RECOMMENDED TECHNIQUE

Brodsky³⁻⁴ recommends the following technique in the use of fast-curing resins: in the cavity preparation undercuts are desirable. Don't make thin margins. The pulp should be protected with adequate cement. In cavity sterilization don't use oily medication. Dry the cavity with warm air and alcohol. It is advisable to wedge the teeth in order to separate and allow a slight excess of the plastic so that after polishing an adequate point be established. Use compression on the matrix to avoid porosity. Do not use celluloid bands for they combine with the surface of the plastic, unless it is to be used only as a temporary restoration. A sectional matrix of hard plaster or stone may be employed to mould the filling or restoration. It is essential that the cavity be perfectly dry and maintained so until the plastic has set or polymerized. Brodsky experimented a relatively unknown substance, the chemical formula of which is: 1-(m-p dihydroxyphenyl)-1-keto-2-methylaminoethane hydrochloride that produces a vasoconstriction which

is estimated to last as long as two hours. You may use the usual medication such as: neosynephrin or styptene. There is a difference in colour effect between very thin and very thick plastics. The proportion should be approximately three parts of polymer to one part of monomer. Spatulate for two or three seconds. Wait at least one minute without removing cellophane. Wax ligature should not come in contact with the filling material. Be certain that the excess material, gingivally and interproximally is removed before it sets. Once it hardens, it is rather difficult to remove much excess of this material from the interproximal or subgingival regions. At body temperature this plastic material should polymerize in approximately 10 minutes. For polishing do not use high speed for plastics in or out of the mouth. The plastics can be disked and polish with rubber disks and felt wheels, using whiting or tin oxide as the polishing agent. New material adheres to old for repair, if dry and moistened with monomer.

PULP-REACTION

Clinical and laboratory tests disclosed that Palapont S.H. is not irritating to the pulp or in any event less irritating than the material of an ordinary cement filling which develops some hydrogen fluoride. Lefkowitz and Manly⁵⁻⁶ made some experiences on the pulp-reaction to acrylic fillings: the acrylic monomer is an ester containing no hydrogen ions and is neutral. The mixed acrylic filling is also neutral. The pH of silicate is about .5 to 1.5. The results of pulp-reaction were evaluated on the combined effect of the cavity preparation and the filling material. The photomicrograph shows that the self-curing acrylic filling material may be considered non-irritating to the pulp. The use of an impermeable liner designed for the particular self-curing acrylic was found to be more irritating than the filling material. There is no penetration of the acrylic material into the dentinal tubules. The usual pathosis

associated with filling material is absent and the odontoblasts in the area of cut tubules are normal. There is no inflammatory exudate or hyperaemia; the blood vessels and connective tissue stroma being normal. The stroma of the pulp reacts to cement fillings in hyperaemia and inflammation of the connective tissue stroma. The acrylic filling is also insoluble in acids. Further studies should be made to determine the reaction to both the restorative material and the cavity liners designed to be used with the resins. Some exothermic heat is generated during polymerization, but with small restorations this should not be sufficient to be harmful.

LIMITATIONS

According to F. A. Slack and his early studies of the question in 1943 the self-curing resins shrink during curing like all other resins to the extent of approximately 0.2 to 0.4% with some subsequent expansion on immersion in water or saliva, but probably not enough to completely overcome the initial shrinkage of the mass. By comparison, silicate cement will shrink on setting to the extent of 0.03 to 0.25%. The resistance to abrasion was not quite satisfactory in the experimental studies, but it was planned to add acrylic acid amine or acrylic acid nitrile. The low resistance of resins to the abrasion limit their use in the case of occlusal or incisal restorations where you have the full force of occlusion. When used conservatively, as in gingival class V and interproximal class III cavities, it would seem that there is little likelihood of severe wear. It seems softer than acrylic denture teeth: but many periodontists seem to favour a softer material in certain conditions for the occlusal impact against the softer filling reacts more kindly toward the tooth supporting tissues. The pigments used with self-curing acrylic is cobalt aluminate to colour in blue, tin vanadate (99% SnO_2 , 1% V_2O_5) for yellow and tin oxide or titanium dioxide for white. According to many authors most self-curing

products now available are subject to a slight yellowish discolouration when subjected to ultraviolet light for prolonged periods. The amount of discolouration observed in the mouth is generally described as being imperceptible. This discolouration is thought to result from the decomposition of the amine which is added as an activator. You have the same discolouration with silicate, but a material which is intended to replace silicate must be superior. This quality of aesthetics of resins has been emphasized too much and they are not as perfect as might be desired. The insolubility in mouth fluids and low thermal conductivity is about the same as the older acrylic products. The adhesion to the dentine is mainly mechanical.

TECHNICAL CAUSES OF FAILURE

Some failures in the use of self-curing resins may result from insufficient or excess of liquid, manipulation while hardening, moisture in the cavity, lack of retention. Insufficient pressure may produce porosity. Some discolouration may be due to the use of instruments which are not stainless steel.

SUMMARY

According to F. A. Peyton⁸ it seems that data are too limited at this time to make a complete evaluation of the self-curing direct inlay resins. The in-

solubility in mouth fluids, low thermal conductivity and colour matching characteristics should be quite similar to older products. The wear resistance or hardness, the dimensional and colour stability, as well as the compatibility of the soft, plastic mass in close proximity to the pulp will need to be studied further before it can be concluded that these resins are comparable or superior to accepted restorative materials. At this time it would seem practical to consider these materials as possessing possibilities for service in limited types of restorations. In all cases they should be looked on as being in the experimental stages of development as well as being used by experimental technique of insertion and application. Patients should be so advised.

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ANNOUNCEMENTS

Maritime Dental Association

The Annual Convention of this Association under the auspices of The Nova Scotia Dental Association, will be held at Digby Pines Hotel, August 30 to September 2, Digby, N.S.

A.D.A. Convention

The 91st annual session of the American Dental Association will be held in Atlantic City, Oct. 30 - Nov. 2.

American Dental Society of Europe. Amsterdam, July 19-22.

F. Douglas Derrick, 140 Park Lane, London, W.1.

A METHOD OF RESTORING FRACTURED ANTERIOR TEETH

by J. P. McGUIGAN, D.D.S., Halifax, Nova Scotia

THIS often presents quite a problem, especially with children who play roughly and take part in sports.

I have found the upper central incisors are the ones more often involved and in a great many cases without involvement of the pulp. These teeth are often fractured in such a way that very little of the tooth is left, so that a strong restoration is impossible.

We may restore it with a plastic jacket crown, doing very little cutting, but these are very often difficult to keep in position. We cannot make a porcelain jacket crown as that would require too extensive cutting, causing trauma to a tooth which is over traumatized already. Furthermore at an early age the pulps are too large to do any extensive cutting. A conventional three-quarter crown may sometimes be used providing there is sufficient tooth structure remaining to support a three-quarter with an open face in which silicate may be placed.

The fractured tooth of which I speak is the one where the tooth is fractured in such a way that insufficient tooth is remaining on the mesial and distal to support an open face three-quarter with the conventional grooves running incisogingivally. In these cases I take a diamond disc and slice the mesial and distal slightly in such a way that the tooth will be narrower on the lingual than on the labial. I then take a small fissure and cut grooves close to the gingival running them linguolabially instead of incisogingivally. With this type of restoration it is difficult for it to be removed as it is removed lingually and in most cases it is seated in chewing, rather than the tendency to become unseated as with the convention-

al three-quarter type. In most cases the lower anterior teeth must be relieved some to accommodate the thickness of gold as the tooth being restored has not been ground any on the lingual. Take an impression of the upper anteriors and bite, also measurement in length of other central to give correct length for the three-quarter crown.

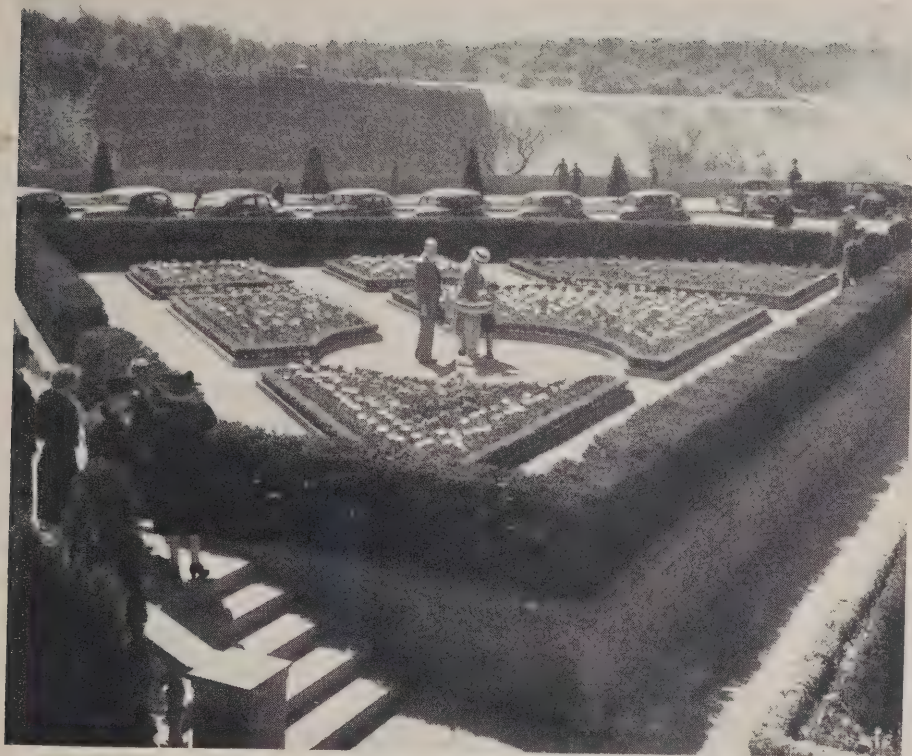
I have also used this type for fixed bridges where the mesial and distal were restored close to the incisal with silicates.

The greatest difficulty is in taking the impression of the prepared tooth. I wax it up directly on the tooth using thin carving wax to cover the lingual, mesial and distal. Then remove and flow inlay wax over this to give it thickness, place on tooth and carve as desired, leaving the labial open but supporting the incisal with wax to retain silicate so that when cast in hard gold the incisal will be supported by gold.

This may also be waxed up indirectly. First take stiff metal or wide band material and adapt to lingual, mesial and distal, punch small holes through the lingual, mesial and distal to hold compound. Heat the compound and press in position from the lingual. Trim off any excess compound from the labial so that it can be removed lingually, pour in diolite or a similar die material and let set. Wax up directly in such a manner that the labial can be restored in silicate and the silicate being retained by the gold of the incisal, mesial and distal.

I find this invaluable in some cases as it will restore the tooth to function and fairly good aesthetics until at a later date it may be replaced with a porcelain jacket crown.

What a father says to his children is not heard by the world, but it will be heard by posterity.—Jean Paul Richter



Courtesy of Travel & Publicity, Province of Ontario.

OAKS GARDEN, NIAGARA FALLS

Suggestion: Plan to register for the conducted Scenic Tour arranged by the Transportation Committee of the Convention. See Orchards of Blossoms, Niagara Falls, and the Oaks Gardens. (See detail in program.)

ANNOUNCEMENTS

Class 1900

The graduation class of 1900 are holding a reunion dinner at the Granite Club in Toronto on May 16 at 6 p.m. All members are urged to come to Toronto for this occasion to celebrate their fiftieth year of graduation.

Write Dr. Perc Moore of Hamilton and tell him you will be there.

3TO

The 3TO class twenty-year reunion will be celebrated in fitting fashion by a dinner in the Fiesta Room, Prince George Hotel. General meeting in Room 129 at 5 p.m.

Refined Hot Air, Boasting and Horseplay will be encouraged in all attending to prove to ourselves that we are not as old as we thought we were going to be twenty years ago.

Class '17 Reunion

Graduation Class of 1917 will meet on Monday, May 15 in Tudor Room, Royal York Hotel. Assemble 5.30 for Dinner at 7. Entertainment at 8.15 p.m. Note: Anyone who was ever associated with freshman class of 1914 is invited.

CANADIAN DENTAL ASSOCIATION

Regulations Governing The Award of Studentships

1. The Canadian Dental Association through its Research Committee offers "Studentships" to suitable students or graduates who have given distinct evidence of capacity for original research, (or, who have won high distinction in scientific study during their University training), and who desire to prepare themselves further for scientific research by continuing their study in the sciences fundamental to their research fields.

2. They are available on equal terms to men and women, and are awarded to the applicants who are deemed best qualified by the evidence submitted.

3. The age of the applicant and marital status will be important considerations when making an award. Previous training will also be taken into account.

4. Application for a Studentship must be made by the candidate to the Research Committee of the Canadian Dental Association and addressed to this Committee, care of the Secretary, Canadian Dental Association.

5. Application forms are available at the Canadian Dental Association Office on request.

6. An applicant shall submit a transcript of his university record together with a statement from his sponsor who may be the Dean of a Dental School or head of a scientific department within a university, showing that in his estimation, the applicant is worthy of training for scientific dental research.

7. The candidate shall state the institution at which he intends to study and the general line of work to be followed.

8. Applications will be considered at the regular stated meetings of the Research Committee of the Canadian Dental Association in September, January and May.

9. The applicant must state how much financial assistance is required to complete the proposed course of study. Payments will be made on a monthly basis during the period of which a Studentship is held.

10. All apparatus and materials purchased with grants are the property of the Canadian Dental Association, unless otherwise provided for in specific cases.

12. Part-time teaching in a university department or faculty may be considered favourably during the terms of tenure of the Studentship.

12. Interim reports on the student's progress may be requested from the Dean or head of the department in which the student is working. The Canadian Dental Association reserves the right to discontinue the Studentship after reasonable warning is given the student, if progress reports are unsatisfactory. The final report prepared by the student and supported by the Dean or head of the scientific department, indicating in some detail the results accomplished in the study, must be submitted to complete the tenure of the Studentship.

Address all communications to:

THE SECRETARY, *Canadian Dental Association,*

211 Huron St., Toronto, Ont.

"There are two valid reasons why some people don't mind their own business: they haven't any mind and they haven't any business."

*"The years slip by; but in the kindly heart
Of friend, of comrade, change can have no part."—Anon.*

He gives twice who gives quickly.—Publius Mimus

The Forum

PROFESSIONAL PROSTHETIC DENTURE SERVICE

by FRANK C. HUGHES, D.D.S., Indianapolis, Indiana

Conclusions of paper in F. Review of Chicago D. Soc., Nov. 15, 1949

Most discussions of the subject of prosthetic dentistry are heavy with technical suggestions, but in this paper I mention techniques only as a means of applying established fundamental principles. In practically all cases where prosthetic treatment has failed, it has been because one or more of the basic principles have been violated. Having attempted to evaluate the effects of prosthetic treatment in hundreds of cases, I would place special emphasis on the importance of the following fundamental principles:

1. Thorough methods in diagnosis and prognosis. Make every effort to anticipate all the problems pertinent to each individual case and advise the patient what he may expect and make him understand why he may expect it.

2. Make your impressions in such a way that they will be true negatives of the tissue in their relaxed state. They should present an accurate pattern for the subsequent denture bases in such special details as a real contact and minute surface anatomy. Make certain that these qualities are reproduced in the casts.

3. All jaw relation records, centric or eccentric, should be made in such a manner as to avoid tissue displacement. Try to determine the rest position of the mandible and use this as a starting point in determining vertical dimension. Having secured these records, use them with an articulating instrument that is capable of reproducing some semblance of the individual patient's jaw movements.

4. Maxillary anteriors and mandibular molars should be positioned in

the same relation to the lips, cheek, tongue and jaws as that occupied by the natural organs. All others should be positioned in such a manner as will most effectively resist functional stresses. Emphasis is placed on a well-balanced, harmonious occlusion as the most important technical factor in all phases of either conservative or restorative dentistry.

Successful application of these principles is not dependent upon any single technique. The effectiveness of techniques and materials varies with individual operators. Use the ones which, in your hands, seem productive of the best results but let us make certain that these results are all that can reasonably be expected. Truly professional prosthetic dentistry contemplates reasonably effective results in each individual case dependent upon conditions. There are no effective controls by which results may be evaluated except those established by accepted fundamental principles. If we have done the best we can, our work is successful. Patients sometimes die following a successful operation. Prosthetic dentistry offers a great contribution to the health and happiness of mankind. It stands as a last, reliable bulwark against the ravages of oral disease. Its effects are manifested in the happiness of millions of denture wearers. It is the one specific treatment which will produce effective results after conservative treatment fails and suffers not by comparison with any other health service. Let us strive to keep it on a high professional level.

ORAL SYMPTOMS IN ACUTE LEUKAEMIA

by W. S. MATHESON, F.D.S. R.C.S. Eng., H.D.D., L.D.S. R.C.S. Edin.

The Dental Department, The Royal Infirmary, Manchester

Summary of paper in Br. D. Jour., Nov. 18, 1949

Oral manifestations in cases of acute leukaemia are of frequent occurrence and their appearance in the early stages of the disease often leads to the patient consulting a dental surgeon before the onset of general malaise. It is, therefore, advisable to have a blood examination done at an early date, in any case of gingival hypertrophy with haemorrhage of sudden onset which does not respond to lo-

cal treatment. Surgery should be avoided in these cases as it is likely to be followed by intractable haemorrhage and a rapidly spreading infection. In the first case reported above a small portion of interdental papilla was removed for biopsy and the area packed with zinc oxide and oil of cloves paste. The subsequent haemorrhage was never successfully controlled and when the patient died one month later there was no sign of healing.



IN PRAISE OF IDLENESS

by SIR HENEAGE OGILVIE, K.B.E., M.Ch., F.R.C.S. Surgeon to
Guy's Hospital, London, Eng.

Excerpt from British Medical Journal, April 16, 1949.

When we sigh for the good old days we are immediately reproved by the social reformer, the politician, the statistician, and the leader writer. We are told that there were no good old days; that these distant periods are gilded for us by the mists of time and by the tendency of onlookers to mistake picturesqueness for happiness; that the fortunate few lived in luxury while the workers were poorly clothed and poorly housed, having none of the pleasures that the working-class enjoy to-day, uncomplaining because they knew no better. On the other hand we make a great mistake if we think that happiness consists in having a forty-hour week, a smart car, a television set, and a chromium-plated bathroom. Happiness consists in a job that provides a succession of varied and interesting tasks that demand skill and call for individual enterprise, that is useful to the community in which we live, that offers security if we do it conscientiously and advancement if we do it well. All these things the craftsmen and peasants of the Middle Ages had. All or nearly all of them we lack to-day.

The world is no longer full of opportunity. The adolescent must study the openings in a number of trades and finally choose one, knowing that he is on a path that he must follow for the rest of his days. He must work hard and wait long for advancement, which is the reward of uncomplaining waiting rather than of merit. And he is prevented by class and family pride, by the wish to start where his father left off, from making a home and starting a family till long after the age when such occupations are instinctive and physiologically desirable. Later we see him still more unhappy, frustrated because the chance for which he has been working has still not materialized, unable even to confess his fears or share his disappointment be-

cause both he and his wife have lived their own lives and put their own interests first for so long before they married that they have been unable to establish that mutual confidence and self-sacrificing comradeship that is the basis of happy marriage. Such men are, in the words of the old song "all dressed up and no place to go." They have been straining so long after achievement that strain has become second nature. They are so constantly keyed up to fight the world that is trying to tread them down that they are in a state of continual and futile preparedness. Their basal ganglia are tuned for combat in the day and rehearsing combat during sleep. Their autonomic system is driving their digestive mechanism beyond the needs of appetite and setting their metabolism at a level they do not really require.

The mechanisms that are being called into play are all normal ones; the only abnormality is that they are being called on constantly. It is unlikely that any organ or system in the body ever works anywhere near to capacity. The number of nephrons in the renal system is reckoned to be three times that required for normal excretion; it is probable that they work in turn and rest in turn. The brain, of all organs in the body, shows perhaps the greatest surplus of functional matter over requirements of function. Body and mind seem to have been designed with a tremendous reserve of essential machinery, so that in their normal working labour and rest may alternate. In modern life they are forced to work abnormally.

The young man who has carried all before him in his medical school, who has good brains, clever hands, and a stout heart, would be a traitor to himself if he did not plunge unafraid into the battle, prepared to give and to take hard knocks till he has won through. But when he has so won, when the

clash of steel sounds fainter behind him and he stands bloody and unbowed with a few comrades equally tough on the upper slopes, he is apt to keep the same combative outlook from mere force of habit, to go on fighting for fighting's sake and working because he has never done anything else. It is

this prolonged and no longer needed exertion that is harmful. It is unfair to all those cultural sides of his nature that have had to be laid aside for a time. It is unfair to his wife and his family. It is bad for his thyroid, his adrenal, and his cardiovascular system. Above all it is bad for his surgery.

FACTORS INFLUENCING THE INCIDENCE OF BACTEREMIAS FOLLOWING SURGICAL PROCEDURES IN THE ORAL CAVITY

by JOSEPH P. LAZANSKY, M.D., D.M.D., LEONARD ROBINSON, A.B., D.M.D.,
and LILLIAN RODOFSKY

Tufts College Dental School, Boston, Mass.

Summary of paper in Jour. of D. Research, Dec. 1949

The incidence of transient bacteremia following dental extractions and periodontal scalings was studied in 221 cases. The results obtained justify certain conclusions.

1. The incidence of dental bacteremias was considerably less than that previously reported by other investigators. The over-all incidence of 10 per cent differed significantly from the 40 per cent incidence obtained by combining the results previously reported. One positive blood culture was found among 56 single extractions, and 16 positives among 92 cases of multiple extractions.

2. Bacteremias, when they occurred, were of very short duration. In the majority of cases, bacteria were detected only within the first minute following completion of the operation.

3. The age of the patient, the amount of operative trauma, and the number of teeth involved in the operation exerted definite influence on the incidence of bacteremia. Bacteremias occurred more frequently in patients below the age of 30 and above the age of 60 than they did in patients aged 30 to 59. The incidence was greater when moderate or extensive trauma accompanied the operation than when only slight trauma was involved. Significantly greater numbers of bacteremia occurred following extraction of two or more teeth than following extraction of single teeth.

4. Variations in tooth mobility and vitality and the presence of periodontal disease or apical infection did not appear to influence the incidence of bacteremia.

MANAGEMENT OF HAEMOPHILIA IN DENTAL EXTRACTIONS

by PHILIP H. WHITE, A.B., D.M.D. and STEPHEN P. MALLET, D.M.D., Boston

Conclusions of Paper in Illinois D. Jour., Oct., 1949

Dental extractions for haemophiliacs now may be carried out as a routine procedure through close cooperation between haematologist and dentist and removal of one tooth at a time. The technique requires care but is not difficult. Teeth and gingival attachments

are first loosened with rubber bands. Fresh whole blood, freshly prepared plasma or plasma fraction I is given preoperatively and postoperatively. Sockets are protected with a preformed plate or splint, securely placed. Wounds are dressed with "Thrombin"

powder in conjunction with "Gelfoam" or "Oxycel." Adequate reserved or fresh whole blood or typed donors

always must be available, for fatal haemorrhage is an ever-present hazard for the victims of haemophilia.

THE EFFECT OF COMBINED THERAPY WITH STREPTOMYCIN AND PARAMINOSALICYLIC ACID (PAS) ON EXPERIMENTAL TUBERCULOSIS IN GUINEA PIGS

by ALFRED G. KARLSON, D.V.M., M.S., Ph.D., and WILLIAM H. FELDMAN, D.V.M., D.Sc.,
Division of Experimental Medicine, Mayo Foundation.

Summary of paper in Proceedings of the Mayo Clinic, September 28, 1949.

Guinea pigs inoculated twenty-five days previously with virulent tubercle bacilli were divided into four groups and treated for 133 days as follows: Group 1, 6 mg. of streptomycin daily; Group 2, 2mg. of streptomycin daily; Group 3, PAS, 4 per cent in the diet; and Group 4, 2 mg. of streptomycin daily, plus PAS, 4 per cent in the diet.

Necropsy and histopathologic examination revealed that the combined use of the two drugs produced a therapeutic effect better than that produced by either drug alone in the same doses and that the results of the combined treatment were comparable to those obtained with the larger dose of streptomycin.

SALIENT ROLE OF HYGIENIST

by HARRY M. KLEND, D.D.S.

Excerpt from Illinois Dental Jour., Feb., 1950

The hygienist, I believe, plays an important role in dentistry. Kansas has had the program for a long time, and I, personally, am sold on the hygienist. I have employed one for ten years and have found my experience very satisfactory.

What does the hygienist do? First of all, the hygienist does the prophylaxis and takes x-rays. The other thing the hygienist does, and what we shall always maintain as very important in a dental office, is that she preserves and maintains your periodic recall. What happens by this action? You preserve the health and appearance of that particular patient. I think it is very important.

What else can the hygienist do? She can do assisting, bookkeeping, or anything else necessary in a dental office.

What must the dentist and employer do? Here is what the dentist must do when he has a dental hygienist. He must assure any patient who is in

doubt that the hygienist can do a thorough prophylaxis—possibly better than you can yourself—that she is a graduate, trained dental hygienist, that she passed a State exam and maintains her license; she is subject to any violations of malpractice, and so forth, and that she is under the direction of the dentist and so does this work just as well as you do. You should put her on exactly the same level. If she is not on the same level then you are rendering an inferior service.

I know, many times it may hurt a man's pride to admit that she can clean teeth just as good as he can, but if she cannot, you better do it yourself, because you are going to get credit for any prophylaxis that goes through your office.

How do you pay them? There are three ways—straight salary, base salary and percentage or bonus, and straight percentage.

The best policy in handling a dental

hygienist in a dental office is to have her in your office, and have her do nothing but prophylaxis and x-rays exclusively, that is, if your practice warrants it. If your practice is not built up to that capacity, then your hygienist can do several other things.

I have taken quite an interest in the economic importance of a hygienist in a dental office. I talked with a dentist who pays his hygienist \$200 a month, and she does his assisting also. He said that all she has to do is 40 prophylaxis at \$5.00 apiece and her month's salary is paid for and he gets the assistance free. He told me that she handles her prophylaxis two hours in the morning and two hours in the afternoon. I thought that was clever. He is working out an economic problem of his own.

I have a hygienist in my office, and if you will pardon the personal reference, I will quote some figures.

In 1948, my hygienist, who does nothing else but prophylaxis and x-rays, made \$5.00, \$4.00 and \$3.00 prophylaxis amounting to a total of \$12,524 for pro-

phylaxis. The total amount of x-rays was \$9,741. So the total work done by the dental hygienist was \$22,265 for one year.

I feel that it is of definite economic value in our particular office to have a person doing that type of work. These girls must have stamina, endurance, and they must have your backing to get the job done right. Many times you have to come in and help them where the calculus is tough, and operative procedure extraordinarily difficult.

We use the hygienist to another advantage. I never see a new patient on the first appointment unless it is an emergency, or something that requires my attention. At the first appointment the hygienist takes the x-ray and gives the prophylaxis, so she is really the first one to make the contact with the patient.

I have tried all the various methods of paying the hygienist and I believe the straight percentage basis is a very good way to work it. It keeps them on their toes and own initiative.

CONTROL OF HAEMORRHAGE

by EDWARD C. THOMPSON, D.D.S., F.A.C.D.

Excerpt from Ill. D. Jour., March, 1950

The control of haemorrhage following dental surgery is a fairly simple matter if the surgery has been properly carried out. Rarely will a persistent haemorrhage occur when all granulation tissue has been removed and the gingivae trimmed to a clean margin. If bleeding does occur, it can routinely be stopped simply by laying a wet gauze sponge across the ridge and having the patient apply pressure for 15

or 20 minutes. Epinephrin chloride or "thrombin" may be used to saturate the sponge. If these measures are unsuccessful it is a great time-saver to block the area with novocaine and reduce the alveolar margins sufficiently to make flaps and suture them together or suture a cotton roll or a pledget of fibrin foam in place. In some instances simply packing fibrin foam in the socket or applications of thrombin solution will suffice.

I want you to grow as beautiful as God meant you to be when He thought of you first.—George MacDonald, The Marquise of Losie

I come here as your friend,—I am your friend.—Longfellow.



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Editorial

LESSONS FROM THE GREAT

Last year was marked the centenary of the birth of that great Russian colossus of physiology Ivan Petrovics Pavlov. He came from a modest family of priests and as a youth was keenly interested in Natural Science. He was trained in the University of St. Petersburg and was graduated from the Military Medical Academy in 1883 with the degree of Doctor of Medicine. He devoted his life to teaching and laboratory experiments. By some he was called the Darwin of Physiology.

Pavlov was endowed with great mental powers and worked unceasingly, being active in his laboratory until four days before his death on February 27, 1936 at the age of 87.

In 1904 he was awarded the Nobel Prize for his work on the salivary glands, an award which filled him with surprise as honours meant nothing to him except as they might contribute to the cause of science. He lost this prize money when the Bolsheviks liquidated all securities.

From the great in other professions much can be learned for our advancement and success in dentistry. This is true in the case of Pavlov who gave the following message to all young scientists: "What would I wish for the youth of my country who devote themselves to science? First of all—consistency . . . I can never speak without emotion of this most important condition for fruitful scientific work. From the very beginning of your work train yourselves to be strictly systematic in amassing knowledge. Learn the A B Cs of science before attempting to ascend its heights. Never reach for the next step without having mastered the preceding one. Never attempt to

cover up the gaps in your knowledge by even the most daring conjectures and hypotheses. No matter how the colourings of this bubble may please your eye, it will inevitably burst, leaving you with nothing but confusion. . . . Study, compare, and accumulate facts. No matter how perfect a bird's wing, it could never raise the bird aloft if it were not supported by air. Facts are the air of the scientist. Without them you will never be able to soar. Without them your 'theories' are useless efforts. Yet while studying, experimenting, observing, try not to stop only at the surface of facts. Do not become an archivist of facts. Try to penetrate the mystery of their origin. Seek persistently the laws governing them.

"Secondly, modesty. Never think that you already know everything. No matter in what high esteem you are held, always have the courage to say to yourself: 'I am ignorant.' Don't allow yourself to be overcome by pride. On account of pride you will be stubborn where it is necessary to be conciliatory; you will reject useful advice and friendly assistance; you will lose your sense of objectivity. In the group which I am called upon to direct, atmosphere is everything. We are all harnessed to one common cause, and everyone furthers it to the best of his strength and ability. Frequently we cannot distinguish what is mine and what is thine, but through this our common cause only gains.

"Thirdly passion. Remember, science requires your whole life. Even if you had two lives to give it would still not be enough. Science demands of man effort and supreme passion. Be passionate in your work and in your quests . . ."

M.H.G.

BOOK REVIEWS

Principles & Technics for complete

Denture Construction by Victor H. Sears, D.D.S., Salt Lake City, Utah. Formerly Professor of Prosthetic Dentistry, New York University; Certified by the American Board of Prosthodontics.

416 pages Illustrated \$5.75
C. V. Mosby Company, St. Louis, Mo. 1949.
Canadian agents: McAinsh & Co. Ltd.,
Toronto

This book is a further addition to the half-dozen recognized texts on Complete Denture Construction and while Dr. Sears has not added greatly to the fund of information already in the possession of the dental profession he has arranged his material in a different and clearly comprehensive manner.

In arrangements of the chapters he first gives an explanation of the principles and then the following chapter explains how to apply these principles. The sequence is logical and

is easily followed. His analysis in explaining the principles of physics are apt and clear.

Dr. Sears has departed a little from the accepted nomenclature but his explanation of various terms and factors are clearly stated.

The references and supplementary reading provide the reader with much additional information. This applies particularly to his description of the anatomy of the oral cavity and muscles of mastication which appears to be over simplified, but probably the author presumes that the operator has already a good working knowledge of anatomy and physiology.

The characteristics and manipulation of various materials used in denture construction are sufficiently explained.

The examination of the patient, and an evaluation of data, a part of dental treatment that is often given too little attention, is well presented and its emphasis is important. Too

often the dental practitioner reaches for an impression tray as soon as the patient is seated in the chair.

He denotes considerable space to the principles of occlusion and the arrangement of teeth in order to "reduce the probability of unfavourable changes in jaw relation, condyle displacement, and damage to the denture foundation". This as well as the principles and methods of tooth selection are covered well.

Dr. Sears is in a position to discuss the problem of denture construction because he has been interested in it and has studied and practised it for many years. His fine grasp of the whole problem and what it is about springs from his wide experience and observation.

The text is primarily for the graduate who has a good working knowledge and it is felt that the undergraduate student would require a text which goes into more detail in anatomy and physiology.

R. J. GODFREY

The Acrylic Plastics in Dentistry by Jacob

R. Schwartz, D.D.S., member of the Advisory Board on Vocational Education, New York City; 447 pages; 365 illustrations with 8 full colour plates. Published by the Dental Items of Interest Publishing Company, 2911 Atlantic Avenue, Brooklyn, 7, New York. Price \$11.00.

This book deals with the history, the physical properties and the chemistry of plastics; the toxicity of methyl methacrylate; the moulding and processing; the preparation and construction of an acrylic jacket crown; the construction of an acrylic jacket crown with a cast gold hood or matrix; the construction of an acrylic crown abutment with a precision slot or recess; supporting framework for acrylic restorations; characterization, staining,

reproduction of artefacts and polishing of acrylic teeth; practical cases and the steps in their construction.

Being inundated with requests for factual articles relating to dental base materials, the editor of Dental Items of Interest turned to Dr. J. R. Schwartz who agreed to carry on the necessary investigations and report his findings serially in Dental Items of Interest. These various articles are compiled in this one volume.

This book provides the basic needs of all dentists, students and teachers interested in plastics, with special emphasis on the use of acrylics in the construction of jacket crowns, bridgework and also partial dentures. A survey is made of the literature so that the reader is able to obtain a broad picture of the industry. Eight plates in full colour show the plastic colour range and completed cases.

The publishers have produced the volume on fine heavy-coated paper which adds much in reading the book. It is also splendidly and profusely illustrated which clarifies greatly the text.

M.H.G.

Index to Dental Literature, 1945-1947

in the English language. Published by the American Dental Association 1949.

This index is wholly changed from the old form. Subject headings are used to classify material, and author and subject matter are listed in straight alphabetical form. One hundred and forty-four English language publications from Australia, Canada, England, India, New Zealand, South Africa and the United States are listed as indexed in this volume. Sixteen periodicals added to the indexing service during 1948, and 1949 are also noted.

This book should prove very valuable to those engaged in educational and research work in dentistry.

M.H.G.

Italian Congress on Stomatology

The 25th meeting of this Congress will be held at Stresa (Lake Maggiore) September 26-30, 1950. Canadian dentists will be welcome. For further information apply to Dott. Enrico Goia, via Lamarmora, 9, Torino, Italy.

ROYAL CANADIAN DENTAL CORPS NEWS

RCDC Final Report on "Magic Paste"

During the past year widespread publicity in the press and over the radio has been given to a "Magic Paste" developed by Dr. D. F. Stedman, a chemist employed by the National Research Council.

The application of this paste to carious teeth was alleged to not only stop any further development of a cavity, but it also was stated to result in the complete restoration of the tooth by healthy tissue indistinguishable from the surrounding enamel.

Dr. Stedman undertook to supply the RCDC with this paste and Major B. P. Kearney, M.B.E., was detailed to conduct a series of tests on patients and observe the results. The directions of Dr. Stedman in regard to the application of the paste were followed in all respects. Radiographs were taken of the teeth being treated before and after the series of tests. All cavities were examined by two dental officers before and after treatment.

A detailed description of treatment and the results obtained are as follows:

Cpl: Carious cavity in occlusal of upper right second molar received a total of 70 applications of the paste over the period 15 Aug. 1949 to 15 Nov. 1949 inclusive. There was no apparent reduction in the size of the cavity nor in the nature of the carious dentine, either radiographically or visually, as a result of the treatment.

ACc: Originally, two cavities were selected for treatment by this method. One, a mesial cavity in the upper right central involving the mesio-incisal angle, was discarded as a test case after 6 weeks because of the difficulty in retaining the material for a sufficient length of time to provide a fair trial. In the other, a mesial cavity in the lower left second molar, the paste was applied a total of 65 times during the period 15 Aug. 1949 to 17 Nov. 1949 inclusive. Results were negative.

Cpl. T: Distal cavity in upper left first bicuspid was treated throughout the period 10 Aug. 1949 to 16 Nov. 1949 inclusive. Using the copper band the paste was maintained in the cavity without interruption for the duration of the test. A total of 44 applications were made. The results, radiographically, were negative. Visually, at the conclusion of the

trial caries appeared of an equally "active" nature with, perhaps, some slight bleaching having taken place.

Miss X: Occlusal cavity in lower left first molar received 80 applications of the paste between 15 Aug. and 14 Oct. 49. There was no evidence of change in the carious process.

Three carious cavities were treated by applications of Stedman's Paste over a period of 3 months. One cavity was treated for 2 months and another for approximately 6 weeks. As a result of these 5 tests (conducted in 4 different mouths) it is concluded that, in these mouths, the material under test exhibits NO beneficial effect on carious dentine.

Edmonton Meetings

On March 14 the officers of the 3rd Dental Coy. R.C.D.C., put on a clinic in connection with the treatment of facio-maxillary injuries. In connection with this there were table exhibits showing the various prosthetic appliances used in the reduction of fractures and the building up of new bone areas in the face.

The subject was introduced by Capt. Gilmour who outlined the method of presentation of this clinic which was divided into two main headings:

- (a) Treatment in the Field.
- (b) Treatment at Base Hospital.

This clinic was exceedingly educational and interesting and demonstrated that considerable work had been put into the building up of this clinic, and the officers, Capt. Gilmour and Capt. Hager have to be congratulated for the manner in which the work was presented.

On March 21 in honour of the visit of Col. Climo, Deputy Director General of Dental Services, No. 3 Coy. R.C.D.C. held a dinner at the Trocadero in Edmonton starting with cocktails at 5.30 and sitting down for dinner at 7:00.

After dinner the whole gathering adjourned and drove over to the Connaught Armouries where a very interesting address was given by Col. Climo and a free discussion afterwards ensued.

Officers belonging to this unit came from different parts of Alberta and an exceptionally interesting evening was had by all. W.E.A.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Freedom

(2nd part in a series on the British Health Scheme)

The patient is free to choose any practitioner and the practitioner is free to accept, or not, any patient. The practitioner is free to join the service, or not, as he sees fit. In the operation of the British Scheme, the issue *does not seem to be so clearly cut as stated*. It would appear that in the long run the patient has more choice of freedom than the professional man. The patient simply walks into the office and if the dentist agrees to accept her, service is begun. The only patient handicap is the fact that offices are crowded and she may have to make a second or third choice of dentist which might happen under private practice.

Many examples illustrating the *lack* of professional freedom may be given:

1. Political propaganda has tremendous effect upon the public. It is a case of the people being told about the wonderful services by *those who do not perform the services*. As a result patients demanded to receive treatment under the scheme and the practitioner either had to join or lose his patients. It was found that even the well-to-do, in large numbers, demanded to be treated under the service. In defence it should be stated that the patient is also in a difficult position for if choice is made to be treated privately, then payment has to be made twice, once compulsory to the government, and again voluntarily to the practitioner.

2. Medical men and dentists had served voluntarily, without pay, upon hospital staffs up to the introduction of the scheme. Dentists in Great Britain are far more intimately integrated into the hospital services than has ever been the case on this continent. Provision was made in the legislation for payment of such services. This left the surgeon or dentist in the position of having to join the service in order to retain his hospital connection.

3. Again, the propaganda is such that the man who stays out is looked down upon and is most apt to lose prestige in his community.

4. It is true that the dentist who joins the scheme may also continue to treat patients privately if he desires to do so. This appears fine but does not work out so well. He *must* not make derogatory statement respecting the

government service. He is overwhelmed with patients under the scheme and if he attempts to take a private patient he is criticized severely which makes his position difficult. He is accused of running a black market.

5. He is tied down to a regulated service wherein is stated what he can do, which allows little freedom for initiative. Any deviation from the specific regulation is most difficult to secure.

6. To each practitioner, as well as patient, is allotted a number and his number rather than name becomes the all-important thing. As one surgeon said, "I have now become number 7869, and no longer does my individual name mean anything." The prized individualism of the dentist or physician certainly received a severe blow.

All in all, the path of least resistance is the course followed by the great majority and one wonders what will happen to professional advancement and the resulting service to the public.

Director of Dental Hygiene Appointed For Quebec

Dr. L. J. Bonneau, Beloeil, P.Q., has been appointed by the Department of Health of the Province of Quebec as dentist in charge of dental hygiene. Dr. Bonneau has been given leave of absence to take the D.P.H. Course beginning next September. In the meantime he is already engaged in directing the Dental Sanitary Units of the Province.

Resolution From Alberta Re Headquarters

The following statement and resolution has been received from the Alberta Board:

At a recent meeting of our Board the problem of a permanent headquarters for the Canadian Dental Association was discussed thoroughly and from every angle as we understand it.

The feeling was that to require the Board of Governors to approve the acquisition of any particular property was too cumbersome and might result in an indefinite delay and the possible loss, through this delay, of some suitable location.

The discussion ended in the following approved resolution:

"The Board of the Alberta Dental Association recommends to the Board of Governors of the Canadian Dental Association that the Executive Committee be authorized to purchase a suitable building for headquarters when such a building may become available and that the Executive Committee also be authorized to make such arrangements for financing the purchase as may be considered most advantageous.

FURTHER, this Board agrees to make a cash grant for such purpose of at least 50% of its proportionate obligation, and

FURTHER, this Board urges that all corporate members be asked to sanction this plan."

1950 Annual Meeting Royal York Hotel, Toronto

BOARD OF GOVERNORS' MEETINGS

Thursday, May 11th

9.30 a.m.—1st Session of Board of Governors.

1.30 p.m.—Reference Committees meet.

7.30 p.m.— " " "

Friday, May 12th

9.00 a.m.—2nd Session Board of Governors.

1.30 p.m.—3rd " " "

7.30 p.m.—Reference Committees meet.

Saturday, May 13th

9.00 a.m.—4th Session Board of Governors.

1.30 p.m.—5th " " "

(Additional Sessions if necessary)

Sunday Evening

9.00 p.m.—Musical.

CONVENTION

Monday May 15th to Wednesday May 17th

—See Journal for details.

The Committee in charge have arranged an excellent program. From advance notices it would appear as if a record attendance will be established.

The Annual Association Meeting of the C.D.A. will be held during the Convention. At this meeting it is anticipated that a historical event will take place. The Newfoundland Dental Association has made application to become a Corporate Member of the Canadian Dental Association. The formalities respecting this application will take place at the Annual Meeting.

"A Charter For Dental Health", is the title of a new booklet to appear soon

This booklet has been prepared by the Committee of the Canadian Dental Association on "Health Insurance Studies." It sets forth in a concise manner a long range plan for the control of dental diseases. There have been many requests for information that this booklet contains both from health workers and the profession alike. It is written for public as well as professional reading and wide distribution is expected.

The booklet deals with the problem of dental health, means of approach, operation of the plan, expansion of the plan, administration, explanation and objectives of the plan.

A copy will be mailed to every Canadian dentist and it is hoped he will see to it that after he has read his copy it is placed in the reception room for patients to read.

Look for your copy soon.

T.R.M.

Dental Health Broadcasts over C.B.C. Network under "Science Reports".

The public relations committee of the Canadian Dental Association under the chairmanship of Dr. Harry S. Thomson are to be commended for two excellent broadcasts over the Canadian Broadcasting Association network on March 28 and April 4.

Dean Ellis of Toronto and Dr. Don W. Gullett, Secretary of the Canadian Dental Association, teamed up to present the progress of dental science in its dental health approach. Dean Ellis termed it, "a revolution in a quiet way." "Twenty years ago," said Dr. Gullett, "we just used to repair teeth; since that time the whole swing has been towards preventive dentistry." This whole presentation did much to bring public thinking up to date in what individuals can and should do for themselves and their families for the enjoyment of good dental health.

On April 4 Dr. Charles Williams, Periodontist, and Dr. Robert Moyers, Orthodontist, teamed up to supplement the message presented by Dean Ellis and Dr. Gullett on March 28. Dr. Moyers pointed out that early and regular care of the child's teeth was of vital importance in caries control but certainly there is more to dental care of the child than intercepting caries. He said, "Early examination can reveal many conditions that lead to irregular teeth in adolescence—Missing permanent teeth

disclosed by x-ray, mouth breathing, thumb sucking, etc." Dr. Moyers suggested the value of early treatment of such conditions.

Dr. Williams pointed out that improper eating habits and abnormal growth and development tending to irregular teeth in the child were causative factors in periodontal disease in adult life. In answer to a question, What does the dentist know about pyorrhea? Dr. Williams replied, "Pyorrhea, as the public call it . . . we call it periodontal disease . . . is a disease that destroys the bone that holds the root of the tooth in place. The underlying cause in many cases is poor general health and the immediate causes in the mouth are infection and abnormal working action of the teeth." He went on to explain that abnormal working action of the teeth could result from irregular teeth and a lack of foods in the diet requiring vigorous chewing. The third cause

of periodontal disease is infection which causes a final destruction of the gums and bone about the roots of the teeth. Dr. Williams left the impression that about 80% of all adults have periodontal disease and that its detection and treatment in early stages is all important because then it can be treated very simply.

A common question asked in the dental office is "What causes pyorrhea?" It is difficult to answer, yet Dr. Williams did a splendid service in handling this problem as he did.

Such educational broadcasts as Dr. Thomson and his committee arranged in these instances reflect very creditably on our profession and are greatly appreciated by an increasing number of Canadian people interested in controlling the ravages of dental diseases.

Copies of both broadcasts are available from Dr. D. W. Gullett, Secretary, Canadian Dental Association.

T. R. M.

NEWS FROM THE PROVINCES

ALBERTA

University of Alberta

On March 25 the staff on the Faculty of Dentistry of Alberta University held their annual stag dinner at the King Edward Hotel. This is an annual affair and during the last year two members were married so that after the luncheon Drs. Samuel and McMurphy were presented with two steel bridge sets. Each gave a very interesting response on being presented with this gift.

On this occasion there were two guests, i.e., Dr. H. A. Bulyea who organized the Faculty of Dentistry in the early days of the University and who is now retired and also Lt. Col. W. E. Addinell, Officer Commanding, No. 3 Dental Coy.

Many of the members contributed towards a very enjoyable evening by telling some exceptionally fine stories and Dr. Bulyea gave some of his reminiscences.

Edmonton and District Dental Society

A meeting of the Edmonton and District Dental Society was held on March 7th at 6.30 p.m. in the Macdonald Hotel in Edmonton. A large attendance was present. After dinner the program consisted of a description of the trip made by six members of this Society to the

American Dental Association convention at San Francisco in October, 1949.

The speakers were: Dr. R. Stuart, Dr. P. Kendal, Dr. J. McLean, Dr. S. Hodgson, Dr. E. Galbraith, Dr. H. McLean.

Each speaker took a particular phase of the convention and elaborated on this as a subject of his address. From an educational and entertaining standpoint, there is no doubt that this convention must have been an outstanding success as the Society listened for close to three hours on the topics discussed by each speaker.

At the April 4 meeting of this Society about 75 members were present and 40 members of the graduating class of the Faculty of Dentistry.

An innovation took place in that an hour and a half was set aside before the meeting for everyone to get acquainted with the outside members at a small cocktail party. It is to be hoped that this is continued as a routine event.

After dinner the program consisted of an essay by Dean W. Scott Hamilton on "General Review of Oral Surgery" and illustrated with coloured slides and moving pictures.

Before the presentation of the paper by Dr. Hamilton, a short business meeting was held when three new dentists of the district were proposed for membership. They were Drs. Brian Dunsworth, George Clarke and Dave

Mintz. The auditors were appointed to go over the books for the past year and a nominating committee of Drs. Ward, Decker and Hawkins was appointed to bring in the nominations for the coming year.

Dean Hamilton was introduced by Dr. Hudson Scott who is a distant relative of his, i.e. his brother-in-law. Dr. Scott rose to eminent heights of oratory in this introduction and we wondered if this was the main speech of the evening.

As the paper on oral surgery given by Dean Hamilton was a very complete one and covered many branches of this very interesting subject, we shall just enumerate at this time the headings of the various divisions. They are as follows:

- Oral surgery the responsibility of the dental profession.
- Cooperation with Dentistry and Medicine.
- Reference of patients.
- Need for greater application of basic sciences.
- Chemo-therapy.
- Penicillin sensitivity tests.
- Penicillin resistance.
- Diagnosis—urinalysis, blood counts, etc.
- Local infection.
- Trigeminal neuralgia.
- Source of pain.
- Aseptic precautions.
- Surgical procedures:
 - Removal of teeth.
 - Removal of roots.
 - Removal of impacted teeth, splitting technique.
 - Cysts and other tumours.
 - Preparation of mouth for dentures.
 - Irritation from dentures.
 - Fractures.
- Post-operative care.

Due to the fact that there was a coast-to-coast broadcast put on by the Canadian Dental Association from Toronto, Dr. Hamilton allowed a break in the presentation of his paper for all the assembled group to listen to the broadcast. Station CBX ran a special line from their broadcasting station in the hotel down to the room where our Society was meeting, so that we heard with much pleasure this dental broadcast from Toronto.

We are hoping to be able to furnish the Journal at a later date with a complete copy in

detail of this paper presented by Dr. Scott Hamilton.
W.E.A.

SASKATCHEWAN

Saskatoon Dental Society

The annual ladies' night was held at the February meeting and was enjoyed by all. It took the form of a Dinner Bridge.

At the March meeting, Dr. Mathew Danton lectured on the Medical Health Services of the city. Dr. Danton is the Medical Health Officer for the city, has a broad training in this field and his lecture was very educational and interesting.
L.D.H.

ONTARIO

University of Toronto Faculty of Dentistry News

Extramural Lectures Given in April

April 5—Dr. W. G. McIntosh and Dr. R. G. Ellis, at Camp Borden Muskoka Dental Society.

April 15, 19, 27, 28—Dr. R. G. Ellis visited six dental societies in Northern Ontario, as follows: Timmins, Kirkland Lake, North Bay, Sudbury, Sault Ste. Marie, and Fort William.

April 18—Dr. J. R. Fletcher at Simcoe. Norfolk Dental Society.

April 19—Dr. G. C. Hare, at Kitchener. Inter-county Dental Society.

April 19—Dr. M. N. Rockman, at Belleville. Bay of Quinte Dental Society.

Extraprovincial Lectures in April

April 5—Dr. S. A. MacGregor gave a paper, a clinic, and took part in a symposium before the Indianapolis Dental Society, at Indiana University Dental School.

April 26, 27 & 28—Dr. P. W. Arkle attended the Michigan State Meeting, where he presented two limited-attendance clinics on the "Interseptal Injection Technique."

The following members of staff were in attendance at the American Association of Dental Schools meeting held at French Lick, Indiana March 24-26. Drs. Thomas Cowling, J. Kreutzer, J. H. Johnson, Frank Martin, A. M. Hord, Bruce Hord and R. A. Hugill. Dr. Kreutzer acted as chairman of the section on clinical administration.

Dr. Bruce Hord and R. A. Hugill presented progress reports on their research studies at the

meeting of the International Association for Dental Research which was in session at the same time and place.

Academy of Dentistry Toronto

The final meeting of this society on March 9 brought to a close an excellent year's program. Dr. Robert G. Kesel, Professor and Head of the Department of Dental Pathology and Therapeutics in the dental school of the University of Illinois was guest speaker. His subject was "An Evaluation of Caries Control Procedures" and his presentation proved an excellent review of present day thought.

At the outset the speaker expressed himself as adhering to the caries causation concept of Dr. W. D. Miller: cavities occur in the teeth as a result of the dissolution of the hard tooth structures through the action of acids produced by fermentation of starches and sugars about the teeth. He discussed caries control from six approaches: dietary, oral hygiene, anti-enzymatic, increased tooth resistance, acid neutralization and anti-bacterial.

Diet—There have been many studies and observations reported where a lowered sugar content in the diet has resulted in a reduced caries incidence. It is estimated that 90% of people have the ability to break down sugars in the mouth and produce acid about the teeth sufficiently potent as to cause dissolution of the enamel surface and further it is believed that an 87% reduction of cavity occurrence is possible through a restriction of fermentable carbohydrate in the diet alone.

Oral Hygiene—There are two main reasons for failure in good dental hygiene: the teeth are not brushed soon enough after eating and then not carefully enough. The speaker maintained that the caries attack from lactic acid is at its maximum twenty minutes after exposure of the teeth to sugar and that the attack is over in two hours. The common practice of brushing the teeth before breakfast and on retiring at night is therefore useless in caries prevention. The custom of indulging in between meals, sodas, soft drinks, pastries and other sweet foods and drinks, was emphatically condemned. If one must have food between meals, nuts, raw fruit or raw vegetables were recommended. Good hygiene results when food particles are removed from about the teeth immediately

after eating by careful brushing if possible or at least by a mouth rinse.

Anti-enzymatic substances—The formation of lactic acid from the fermentation of sugars in the mouth is promoted by the action of enzymes. Investigators have given thought to using anti-enzymatic poisons to prevent the fermentation process. Vitamin K is one of these substances. Unfortunately it seems that up to the present this approach is not very practical and the cumulative effect of such substances is not known.

Increased tooth resistance—The action of fluorine on the surface of enamel seems to render it less soluble to mouth acids. It was the speaker's opinion that the best method of applying fluorine is by topical application of 2% sodium fluoride to the *clean, dry tooth surfaces*; this should be repeated 4 times at intervals of one week. If this was properly done at ages 3, 7, 11 and 14 an average reduction of 35 to 40 per cent in cavity formation could be expected. The value of adding fluorine to the drinking water supply artificially however has not yet been proved beneficial.

The speaker referred to the work of Dr. Gottlich in which he recommends the use of 40% zinc chloride and 20% potassium ferrocyanide to the meticulously prepared tooth surfaces. From the discussion it seems that beneficial preventive effect has not been adequately proved.

Acid Neutralization—People who enjoy good immunity to caries have a highly buffered saliva. There is some hope that this can be induced artificially by adding to the dentifrice some substance that has a prolonged acid neutralizing action, e.g. Urea. Some good studies as to the value of this method of caries control are underway and will be completed shortly. However the speaker stated that while he has hopes that ammoniated dentifrices may be useful yet at the moment factual information is not available.

Anti-Bacterial — Some investigation has been underway as to the effect of penicillin on the growth of the bacillus acidophilous. It was suggested that inclusion of penicillin in a dentifrice might have value but it could also produce a strain of bacteria resistant to the influence of the drug and also sensitize the individual to penicillin.

The speaker suggested there were two types

of bacteria involved in caries production: acid formers and a proteolytic type. The acid formers dissolving the hard inorganic substance (enamel) which was followed by the proteolytic group dissolving the organic matrix. He expressed the view that the caries activity in an individual mouth depended on the ratio balance of the two bacterial groups. If the acid formers were greatly superior, caries activity was rampant whereas if the opposite were true or the acid formers were reduced, caries activity would be lessened.

Dr. Kesel referred to the work of Dr. Philip Jay of Ann Arbor, where caries susceptible patients were placed on a diet radically restricted in fermentable carbohydrates for a period in some instances as short as six weeks. If the bacillus acidophilous count was lowered sufficiently, the patient was then allowed to gradually resume a normal diet. The result of this treatment showed a caries activity reduction which was effective for as long as two years. The speaker's interpretation of the result obtained was that there was a ratio change in the two groups of bacteria involved in the caries process. The superiority of the acid formers was reduced in their relation to the proteolytic type.

In summary Dr. Kesel stated that the uses of anti-enzymatic poisons, ammoniated dentifrices and anti-bacterial substances were all in the experimental stages. But he did emphasize the value of recognized methods of known caries control—

1. Diet restricted in fermentable carbohydrates.
2. Avoid as much as possible between meal consumption of sweet food or drinks.
3. Proper and adequate mouth hygiene.
4. Careful topical application of 2% sodium fluoride.

T.R.M.

Dental Nurses' Alumnae

"Dental Studies in the Arctic" was the topic Dr. P. W. Arkle chose for his address to the Dental Nurses' Alumnae Association of Canada at the April meeting. His prize-winning kodachromes made the lecture very interesting. Prior to the meeting, members completed one hundred large Cancer Dressings. Miss Dorothy Dearing presided at the coffee hour which followed the meeting.

Dr. Ernest Rowlett Visits Toronto

It was a very happy occasion to have a visit from Dr. Ernest Rowlett of England on March 20. Dr. Rowlett who is President of the Federation Dentaire Internationale came to America to give a series of lectures at Meharry College. While on this side of the Atlantic he came over to Toronto to renew some friendships and kindly gave one evening to the Health Insurance Studies Committee of the Canadian Dental Association. Dr. Rowlett is greatly admired and respected both for himself and as a dentist; he is a man of wisdom and knowledge gained from his many years of experience and study. Members of the Health Insurance Studies Committee were greatly favoured when this kindly gentleman agreed to discuss with them Dental Health problems as he saw them.

Dr. Milton Armstrong Honoured

Members of the Ottawa Dental Society honoured Dr. Armstrong at their meeting on March 13 by presenting him with a brace of pipes. This spring Dr. Armstrong will have completed his 50 years in practice. Dr. W. C. Macartney made the presentation.

QUEBEC

Bobby Bell Memorial Trophy

Charlie Sanderson from Regina, member of the senior McGill Redmen for the past three years in the Intercollegiate Union Hockey race, was awarded the Dr. Bobby Bell Memorial Trophy at the club's annual dinner held March 17.

Donated by the Montreal Dental Club in memory of the late Dr. Bell who coached some of the greatest hockey teams McGill ever had, the trophy is given to the player considered most valuable to his team and most sportsmanlike, the winner being chosen by members of the team.

Dr. MacSween, President of the Montreal Dental Club, presented the trophy to Sanderson, with Dr. Arnold Mitchell also in attendance.

The Montreal Dental Club

The regular monthly meeting of this Club was held on March 2 in the Medical Building,

McGill University, the president, Dr. S. A. MacSween being in the chair. Dr. A. G. Racey introduced the speaker of the evening, Dr. R. Gendron of the Department of Periodontia, University of Montreal. Dr. Gendron has recently returned from one year of post graduate research in traumatic occlusion under Dr. Miller returning with a Certificate in Periodontia. His subject was "Equilibration of Occlusion for the General Practitioner."

Dr. Gendron stated that almost 90% of all patients have occlusal problems of some sort but that we seem to forget that the teeth are in the mouth to "function." Most dentists realize the importance of balanced occlusion in the field of Prosthodontia, but all too few seem to appreciate that balance is of equal importance in the natural dentition.

With regard to the operation of equilibration, Dr. Gendron stated that

1. Freedom of movement is required with no interference.

2. Best function is obtained with maximum contact in all jaw movements.

3. The form of the teeth is important; they should not be ground flat, but if this is done, they should be reshaped.

4. The plane of occlusion should be similar to that obtained with a bite plane in full denture construction.

5. The mouth should be regarded as a whole functioning unit.

In cases where there is excessive overbite, to obtain protrusive or lateral movements, the patient opens the mouth wide causing the condyle to lose contact with the temporomandibular plane which in some cases results in a pathological condition. Even a single cuspid is capable of doing this. The correction of such conditions is by orthodontia, grinding and restorations; he warned, however, against the indiscriminate use of bite-opening techniques.

Comparing the equilibration of the natural dentition to that performed in full denture construction, Dr. Gendron noted that in the former, the centric position is present whilst in the latter it is determined; in this position, the natural anterior teeth are in contact, whilst in prosthodontia, there is no contact of these teeth. In the natural dentition it is possible to relieve one tooth to obtain physiological rest. Again in the natural dentition, every anterior tooth should be in contact in the protrusive position, and as many as possible in the lateral

excursive, while in artificial dentures, all teeth must be in contact.

With regard to food impaction areas, in addition to obvious causes, we should always watch for plunger cusps and the lack of marginal ridges: the former should be eliminated and the latter recarved as required.

Following an interesting question period, the speaker was thanked by Dr. A. C. Voisard.

The Mount Royal Dental Society

The Mount Royal Dental Society held its general meeting on March 17 at the Mount Royal Hotel. In a morning and afternoon session the guest clinician Dr. S. G. Applegate, Professor of Denture Prosthesis at the University of Detroit, spoke on "Mouth Preparation for Clasp Partial Denture Restorations and Problems of the Complete and Partial Case." Dr. Applegate illustrated the latter topic with coloured slides.

"Mouth Preparation for Clasp Partial Denture Restorations" was the topic in the morning session. When confronted with edentulous spaces do not reach immediately for an impression trap, Dr. Applegate advises and gives the following set of pre-impression "musts":

1. Complete oral radiograms to reveal (a) remaining natural teeth that can be retained and those that should be removed due to caries or loss of alveolar bone support; (b) what periodontal treatment is indicated; and (c) presence of root fragments or other pathology.

2. Periodontal treatment instituted so that teeth with improved health may be retained; hopelessly involved teeth extracted.

3. Operative work completed before impressions taken so that any doubtful teeth if found on closer inspection to be poor risks may be removed.

4. Thorough prophylaxis: teeth should be scaled and highly polished with pumice and tin oxide.

5. Study casts poured from hydrocolloid or alginate impressions.

Dr. Applegate stressed the relevancy of these study casts and the necessity to have them accurate, as upon their accuracy depends the entire planning of the case; success is unlikely if they are not exact. From the study casts one determines which teeth to clasp and whether

the shape of the abutment teeth should be altered to straighten them into the line of insertion. This is done by grinding the surface enamel or placing crowns or inlays. In the latter choice Dr. Applegate warned his hearers that there was a danger of elongating the crown which should never exceed in length the root portion supported by sound bone. From the study casts we determine also where the occlusal rests will lodge and plan any necessary reshaping of the areas involved.

Returning to the mouth we equilibrate and establish the plane of occlusion of the remaining natural teeth. Teeth that greatly disturb this line should be removed rather than jeopardize the success of the case. Seats for occlusal rests are ground in the marginal ridges that will house them; the rests should cover at least half the bucco-lingual dimension and extend into the occlusal pit on the corresponding side of the proximal surface against which the clasp is to rest. In that way its pressure is directed within the outline of the root and not outside it. The rest should be sufficiently thick for strength.

Before taking the impression Dr. Applegate advises to have the mouth cleared of viscous saliva by having the patient rinse with an aqueous solution of aromatic spirits of ammonia.

In the afternoon Dr. Applegate spoke on "Problems of the Complete and Partial Cases." He discussed the problem of decay and sensitive areas developing under clasp arms. He maintained that when teeth and clasps were kept scrupulously clean decay would not develop. Where sensitivity did develop he advocated the silver nitrate treatment.

With reference to the problems arising from complete upper and partial lower cases he pointed out that a great deal of damage can result where an upper is worn with opposing lower natural anteriors alone. The maxillary alveolus resorbs in the anterior region and the mucosa over it hypertrophies. These combined cases must be worn both at the same time or not at all.

An interesting and thought-provoking comment by Dr. Applegate was that at the University of Detroit where he teaches, all dentures, partial as well as complete, are relined one week after insertion.

J. RAUCH

The Montreal Endodontia Society

A general meeting of this Society was held on March 27, in the Dental Lecture Hall at McGill University. Dr. Robichaud, the president, introduced the speaker of the evening, Dr. A. Gerald Racey, Associate Prof. of Oral Pathology at McGill University and Associate Prof. of Oral Pathology at the Université de Montréal. Dr. Racey's subject was "The Consideration of Diagnosis of Pulpitis and Apical Periodontitis."

The treatment of different phases of pulpitis is difficult, said Dr. Racey, but without a proper diagnosis based on an understanding of the pathology, it is almost impossible.

The pulp, being enclosed in a hard unyielding core of dentine, is formed of stellate reticulum—a form of specialized connective tissue. The cells being star shaped, with wide intercellular spaces, allows for swelling without undue damage being caused.

The first stage of pulpitis is hyperaemia brought about by caries of the dentine, thermal changes, erosion, abrasion, etc. This produces an engorgement of the blood vessels in the area resulting in a dilation of the vessels and a slowing of the blood stream. This causes the nerves in the immediate vicinity to become hyperirritable. Diagnosis of this stage is made from the following tests: 1. Cold produces pain; 2. mild heat brings relief although intense heat will also produce pain; 3. electrical pulp testers; less current is required for reaction; and 4. percussion is negative.

If untreated, the condition continues into an acute partial pulpitis of the area with a serous stage developing; i.e., white blood corpuscles and serum pass into the tissue resulting in oedema of the area. There is still, however, no destruction of pulp tissue. Diagnosis at this stage is made from the following: 1. Pain is spontaneous, intermittent, mainly produced from cold, but also from heat; 2. Pulp testers: less current required; 3. Percussion tests are still negative.

With caries the causative agent, bacteria, now enter the pulp resulting in pus formation from the destruction of the blood cells, bacteria, pulp tissue, etc. This is known as the Purulent Stage and defensive reactions now occur. Diagnosis: same as with the oedematous stage.

If untreated, the condition advances to a Total Pulpitis. Or, if the wound is open, into

a type of Chronic Pulpitis. In the Total Pulpitis where the cavity is closed, we find rapid degeneration of the pulp by pulp abscesses scattered throughout the whole pulp and it is almost a Complete Total Pulpitis (Closed Form). Diagnosis: 1. Pain: spontaneous, throbbing, continuous; 2. Heat and cold both produce or increase pain; and 3. Percussion produces pain.

If however, there is an open wound, gradual degeneration of the local area occurs with hyperaemia, calcific deposits, gradual degeneration of the sensory nerves, and new fibrous type tissue cells are formed—almost like granulation; the rest of the pulp may remain nearly normal. Diagnosis: Subdued symptoms are characteristic in that there is no acute pain; heat, cold and percussion produce subdued symptoms; but more current is required with the pulp testers. This condition may last for a long period of time.

The closed acute total pulpitis will now proceed to Total Gangrene of the Pulp. Here the diagnosis is made from the fact that percussion produces a definite reaction while cold, heat and pulp testers produce no reaction whatever. In multi-rooted teeth, diagnosis may be somewhat complicated due to the fact that it is possible to have complete gangrene of one root canal whilst the other may remain in a state of chronic inflammation. Diagnosis: 1. Cold brings relief; 2. Heat produces a definite reaction; and 3. Percussion tests are also positive.

Complete Gangrene of the pulp now follows with infection passing into the periodontal membrane at the apex of the tooth; this produces hyperaemia and oedema of the area with the resultant extrusion of the tooth and osteitis, although no bone break down is present yet. Diagnosis: 1. x-ray, palpation, heat, cold tests are all negative; but 2. percussion tests are definitely positive. This condition continues into a periosteal abscess with formation of pus which generally points to the buccal. Diagnosis: intense pain with a hard oval swelling accompanied by temperature, malaise, constipation, etc., but there is no great swelling of the face. This continues to a sub-periosteal abscess and then to a sub mucous abscess with all its spectacular symptoms of swelling, pointing etc. A fistula now results with drainage and if it is possible to remove the infection, regeneration of the area can still occur. If the

fistula is allowed to remain pus will form periodically and the x-ray also assists in diagnosis at this stage.

If the condition is allowed to persist, and if epithelial pearls are present in the area (the remnants of Hertwig's Epithelial Root Sheath—the formative organ of the root) they are stimulated and completely encircle the infection—resulting in a cyst.

Dr. Racey used photomicrographs and x-rays to illustrate the above conditions.

Following an interesting question period, Dr. Veith expressed a vote of thanks on behalf of the Club.

R.F.H.

Bacteriology Meeting—Université de Montréal

At this University on March 23 it was the pleasure of the members of the Société Dentaire de Montréal, the Mount Royal Dental Society and the Montreal Dental Club to have outlined for them the latest developments in that field of bacteriology particularly associated with dentistry.

Dr. Ernest Charron, Dean of Dentistry, Université de Montréal, bid welcome to the guests of the evening and introduced the lecturer Dr. George Valley, President of the New York Chapter of the Society of American Bacteriologists and Chief of Research at the Bristol Laboratories.

The speaker mentioned briefly his association with the original experiments carried out in dental caries at Yale University. He noted that not only was it questioned whether the lactobacillus acidophilus caused caries but also which type of this organism was actually the causative agent. He went on to spend most of his allotted time on penicillin since, as he explained, this antibiotic agent was used more in dentistry than such agents as aureomycin, streptomycin, etc. The chemical structure of penicillin was given and its properties related. Dr. Valley requested that those using penicillin convert "units" to "milligrams" so that comparisons could readily be made with other antibiotic agents, e.g., 100,000 units = 0.6 mgms. Several interesting case histories were described. Emphasis was laid on the fact that humans have shown practically no sensitivity whatever to penicillin itself. In particularly obstinate cases of oral infection, it was suggested that the dosage of penicillin might be

varied; also that several antibiotic agents in combination might be used. Failure of response to these, the old fashioned but reliable remedy, silver nitrate might be tried.

Dr. D. P. Mowry, Dean of Dentistry, McGill University, thanked the speaker and stimulated the question period by pointing out that, unless there was the proper media, harmful bacteria could not possibly exist in the mouth.

E. S. DORION

NOVA SCOTIA

Sydney Dental Society

At the March 13 meeting of this Society it was decided to enroll in the second Telephone Course of the University of Illinois.

S. D. FRORIAN

Nova Scotia Dental Society

The February meeting of this Society was addressed by Dr. I. M. Murray, Assistant Professor of Anatomy at Dalhousie University. His topic "Anatomy of Interest to the Dentist" proved an interesting subject, and evoked many questions and much discussion.

In March the speaker was Dr. W. C. Oxner, his subject being "Prophylaxis." Attention was called to the fact that this phase of practice is comparatively rarely discussed, and, that thorough and routine prophylaxis does not always receive the attention it merits. Many teeth lost through advanced gingivitis might be saved by routine periodic prophylaxis.

The actual procedure as followed by the speaker consists of six steps arranged in logical sequence. The necessity for thorough subgingival scaling was stressed, also, the polishing of every surface of every tooth. This procedure gives the opportunity of observing the general condition of the mouth, the condition of the gums and underlying bony structure, malocclusion, traumatic occlusion, contact points, etc., and implies their correction.

In many instances cooperation of the family physician is a necessity; diet is discussed; education of the patient regarding adequate brushing of gums and teeth, also massage is stressed. Above all, absolute necessity of cooperation by the patient is demanded, for otherwise, a little of lasting value can be accomplished.

This subject was well received and much discussed.

W. C. O.

NEWFOUNDLAND

Newfoundland Dental Association

The annual dinner meeting of this Association was held at the Newfoundland Hotel, St. John's, on March 4.

The following officers were elected:

President—Dr. T. E. Harris.

Vice-President—Dr. R. W. Goodwin.

Sec.-Treasurer—Dr. G. E. Mallam.

Members of Board—Drs. E. P. Kavanagh, A. B. Kennedy and M. F. Hogan.

BRITISH COLUMBIA

British Columbia Dental Association

During the first week of June, another slate of officers and executive committee of this Association will assume office under the leadership of Dr. Jack Mercer, of Victoria, following the election held at Kamloops on May 6.

In the past year, two of the leading committees of the Association, the Dental Public Health, and the Public Relations committees, have been actively associated with the Department of Health and Welfare of the Province in setting up a long range Dental Public Health program, and in establishing methods of carrying information on such matters to the public at large. Selections have been approved from a number of moving pictures, and many forms of literature have been examined and criticized, in preparation for distribution. A speakers' organization is being established, under the chairmanship of Dr. Jack Penzer, of Langley, with, as its objective, the training of a number of members of the profession, who will be available to speak at public meetings, to carry to the people the message of dental health.

A provincial dental library will be in operation later in the year, organized under professional methods, and well stocked with current dental literature of all descriptions. The library will be housed in the new headquarters of the Association, in the suite of offices it occupies in conjunction with the College of Dental Surgeons of British Columbia, and the Vancouver and District Dental Society.

As usual, some of the hardest working members of the profession were engaged in planning and presenting the annual convention, held this year in the Interior of the Province for the first time. Dr. Ralph Hall and the

chairmen and members of his various committees, together with the Secretary and Treasurer of the Association, deserve more credit than we can express for their untiring efforts.

The quarterly Bulletin, the official publication of the Association, has been splendidly handled by the editor, Dr. Harry Johns, of Victoria.

Telephone Course

The telephone course, presented by the University of Illinois once each month during the winter, came to an end with the April session. Those who attended the course for the past six months seem to agree that Vancouver should be one of the receiving stations for the course of 1950-51, which is already in the process of preparation.

Vancouver and District Dental Society

The April meeting of this Society took the form of an afternoon and evening session on the subject of full denture prosthesis.

Mr. Harry Page, of California, a well known speaker on the subject of engineering principles underlying full denture construction, spoke to an afternoon group, and later to a dinner meeting. He presented a series of excellent slides, demonstrating the principles of mucostatic impressions, and the resultant effect on tissues as compared with impressions taken with standard methods. Later, a moving picture film showed the actual application of the principles in full and partial denture construction.

For the final meeting of the year, the pro-

gram committee of the Vancouver Society selected the Rev. Wm. Hill, of Victoria, whose fame as a popular after-dinner speaker is widespread on the Pacific Coast. Another popular feature of the program was the showing of travel films by the United Air Lines.

Large Group Seek Admission to B.C.

The largest class of candidates in the history of the Province will seek admission to practice in British Columbia this spring. It is estimated that, if all those presently seeking admission are successful, the dental population of the province will be increased by over ten percent. Since the cities and lower mainland points are already more than filled, it is to be hoped that some of the outlying districts may be able to secure the dental services so badly needed for many years.

Congratulations to Doctor Thorseness

We offer sincere congratulations to Dr. Julian Thorseness, of Prince George, who is taking an active interest in Boy Scout work in his district. Our younger men could find no more interesting or more profitable occupation for spare time activities than this work—so essential in a world where everything depends upon the calibre of the coming generation. Every professional man practising in a community owes something more than his professional efforts to the welfare of the community. Every dentist is particularly well equipped or should be, to associate with and assist in the guidance and training of the youth of his community.

L. G. R.

Ever go to a bargain sale? That is what we will have on our hands as soon as the doors are thrown open to socialized medicine. The first ones in get about what they came for; the later ones might be lucky and occasionally obtain what they want, but the last group usually comes along for the ride. This last group represents a very large portion of the total and is responsible for most of the chronic back-log of patients, the endless clerical work and the perpetual unravelling of red tape. Malingering will increase greatly out of all reasonable proportion.

If socialized medicine becomes a reality three things will take place: (1) The quality of medical treatment will be forced down: (2) The number of patients will constantly increase: (3) The cost to the taxpayer of administering such a plan will pyramid year after year until the tax burden is so great or the cost of administration so excessive that the program will prove to be a fantastically expensive failure.

The health of the Nation is at stake. What are we going to do about it?—From Editorial in Jour. of California State Dental Assoc., June, 1949.

DENTAL ASSISTANTS

THE RECALL LIST*

by MARGARET KITCHING, Winnipeg, Manitoba
Secretary to Drs. Garvin, Johnson and Brown

As a general rule, dentistry is regarded by most patients as an unpleasant and expensive annoyance, in short, a necessary evil (and some of them cannot see why it is so necessary). Thus the dentist or his assistant should point out the importance of regular dental attention not only for the preservation of one's teeth but for one's general health as well.

It is a normal human reaction to try to postpone as long as possible the performance of an unpleasant duty, and so we find that merely telling a patient to return in a specified number of months for a check up is not always sufficient, and for that reason, there has come into existence the periodic recall list.

The recall list is one of the most important phases of practice building and is one of the many responsibilities of the dental assistant. It requires tact and intelligence if it is to function effectively and successfully.

One of the main things to remember in setting up a recall list is that a patient should never be placed on this list without the patient's consent. When pointing out the value of periodic examinations the dentist or his assistant should ask the patient if he wishes to be placed on call, or very often the patient himself will ask to be called.

There are several different types of recall systems and one of the important items in setting up such a system is to choose one that will not be too complicated, one that will save time and one that will work effectively. Some of the systems are operated by means of a recall book, some by making notations in the appointment book and some by card-index files. The first two have one or more disadvantages; the third is the one I will endeavour to explain to you. It has been in use in our offices for some time and has proved quite satisfactory. This system is operated in a filing drawer; three sets of index cards are secured, one set for each month of the year and the other two sets are tabbed with the letters of the alphabet. One set is for appointments that are arranged when the patient is called, the other set being for patients who will call at a later date to arrange their own appointments.

A prophylactic card is made out for each patient. On this card appears the name, address, telephone number (home and business) and any other pertinent information which might be helpful when calling. A notation is also made (in red ink) on the patient's history chart that he is to be called every 3, 4 or 6 months as the case may be and also a note made of the time to be saved for him, also the date when he is next due.

Now, we come to the methods of notifying patients when they are due for their check-up. The most popular method is the use of the telephone. However, some patients may be contacted by letter and some offices make use of engraved cards. The advantage of telephoning is that the patient has the opportunity of selecting the most convenient day and hour for him. In telephoning, so that your conversations may be intelligent and coherent, decide in advance what you are going to say. One might say, "I am calling for Dr. Blank, we promised to call every 4 months for a prophylactic appointment, Dr. Blank could see you Saturday, March 18 at 10:15. Will this be convenient for you?" or "I am calling for Dr. Blank, we promised to call you every 4 months for a checkup. I could arrange an appointment on Monday, April 14th, would 3:15 be convenient for you?" Always have a definite time in mind: after you have the patient on the line don't start casting around for a time. Gradually you will come to know what hours are most convenient for your patients. You will know that Miss Blank prefers a noon hour appointment and when you telephone Miss Blank offer her a noon hour appointment; it will save you much time and will also create a favourable impression on the patient. Also try and create the impression that you are rendering the patient a great service by calling him. You and your doctor can decide how you will call; you might call so many patients each day or you may mark off a week or part of a week and devote it to prophylactic appointments. Whatever you decide, try to keep your list up to date as much as possible.

After an appointment has been arranged the prophylactic card is marked and filed away in the drawer under the file marked "Appointments Arranged". Should it not be convenient for the patient to arrange an appoint-

ment just at that particular time, he may ask you to call him again in two weeks or a month's time or he may say that he will call you later, in which case the card is marked and filed under the file marked "Patients will Call". When an appointment is arranged a T is marked after the patient's name in the appointment book; this shows at a glance that we have telephoned the patient; it also facilitates in picking out the pro cards after the patient has been in for his appointment.

After the patient has had his appointment the prophylactic card is removed from the file; if it is not in one file it will be in the other; on it is entered the day the patient was given prophylaxis and the date when due again. This is also marked on the patient's history chart (in red ink). The prophylactic cards are then filed away under the file marked with the months of the year. Always check the patient's history chart to make sure they were given prophylaxis.

*Presented before the Winnipeg Dental Nurses' and Assistants' Association, March 13, 1950.

Mrs. Marion Edwards Retires

The many friends of Mrs. Marion E. Edwards, R.N., will learn with considerable regret of her recent retirement. A graduate of New York City Hospital, now Bellevue, Mrs. Edwards joined the staff of the Division of Dental Services, Toronto Department of Public Health in 1916, and for the past thirty-four years has served faithfully and well in different posts throughout the service. She will no doubt be remembered by recent graduates of the Dental Faculty, University of Toronto, where up to 1946, she had charge of the pupils coming from Toronto schools to the Children's Clinic in the Infirmary.

Mrs. Edwards was always keenly interested in any measure that would improve the training and efficiency of the dental assistant and would raise her standing and recognition. She was a charter member and later President of the Toronto Dental Nurses' and Assistants' Association which was started in 1927. She felt strongly that the beneficial work of this Association should be extended to wider fields and so in 1930 she organized the Ontario Association of Dental Nurses and Assistants, and became its first President. Then later on, in 1945, she founded a Canadian Association of which she is still President.

All of this has not been accomplished with-



MRS. MARION EDWARDS, R.N.
Toronto, Ont.

President of the Canadian Dental Nurses' and Assistants' Association.

out a great deal of hard work and considerable travelling, largely at her own expense, to widely scattered parts of this Dominion and also to attend meetings of sister organizations in the United States. It is very gratifying to learn that her efforts to unite the dental assistants of Canada in a strong united organization have been recognized and appreciated by the Canadian Dental Association.

In addition to the recognition accorded to her by her own Associations in Canada, Mrs. Edwards had conferred on her Honorary Membership in the British Dental Assistants' Association and the American Dental Assistants' Association reads as follows:

"For loyal and distinguished friendship and support in behalf of this Association

MARION EDWARDS

Founder of the Canadian Dental Nurses' and Assistants' Association is awarded this

Honorary membership certificate.

Lucille Black, President,

Aileen M. Ferguson, General Secretary

Miami Beach, Florida, October 16, 1946."

Although she has retired from active service with the Department of Public Health, Mrs. Edwards hopes to carry on her work with her Associations for some time yet. In this new

field she has made an outstanding contribution to Dentistry and she deserves the grateful thanks, not only of dental nurses and assistants, but the dental profession as a whole.

ALBERTA

Edmonton Dental Nurses' and Assistants' Association

At the February meeting of this Association it was found that circumstances would not permit of holding a spring clinic as planned.

Miss Betty Warner, a graduate dental hygienist from Grand Rapids, Michigan, addressed the group during her brief visit in Edmonton in February. Miss Warner proved most interesting as she has had experience both as a teaching and practicing dental hygienist.

MARION W. LUNDY

SASKATCHEWAN

Saskatoon Dental Nurses' Society

The regular meeting of this Society was held on March 14. The guest speaker for the evening was Dr. M. J. MacDonnell, who chose for his topic "The Loyalty of a Dental Nurse to her Employer." This talk promoted an interesting discussion, after which lunch was served.

PAT HALVORSON

QUEBEC

Dental Assistants

This Association held its Founder's Dinner in memory of the late Rachel Ratner at the Queens Hotel on March 6.

Miss Margaret Good, the president, introduced as guest speaker for the evening, Mr. G. Duhamel, who spoke on "French and English Radio Broadcasting."

Mr. Duhamel said that as a market the Province of Quebec well exceeds one billion of sales annually, from a consumer standpoint, representing one quarter of all buying power in Canada. As French and English speaking Canadians are different, French writers are and should always be used to handle French publicity.

NOVA SCOTIA

Halifax Dental Nurses' and Assistants' Association

The monthly meeting of this Association was held March 13 with nineteen members present. The President, Chris McGee, was in the chair.

Miss Ann Archibald gave a talk on the

"Budget Plan" offered by the Maritime Medical Care Inc.

Miss Merita MacDougall, R.N., presented an interesting and informative paper on "Sterile Technique in the Dental Office." She was assisted by Miss Vi Lillington, R.N. A hearty vote of thanks was extended to the speakers.

Plans were discussed as to the Association donating milk to pre-school children, under the direction of Miss E. Tory of the Welfare Bureau. This is deemed a very worthy cause.

Prior to the March meeting, the assistants were tendered a banquet given by their doctors. After a sumptuous repast movies were enjoyed and remarks were made by Chris McGee and Avis Ritcey. Dr. J. P. McGuigan spoke on behalf of the dentists present.

BRITISH COLUMBIA

British Columbia Dental Assistants' Association

The spring House of Delegates meeting of this Association was held on February 26 in Vancouver with 15 representatives present. The B.C. pins will be ready by Convention time and the price was set at \$1.25 each. The banner donated by the B.C. Dental Company was displayed and greatly admired. The Fraser Valley Association is mounting this crest on gold satin for the head table. The finishing touch for the new gavel is a natural coloured wooden box donated by the Ash-Temple Co. in Victoria.

Vancouver Dental Assistants' Association

Forty-four members attended the March 13 meeting of this Association.

Miss E. R. Erskine, R.N., Superintendent of Nurses, Children's Hospital, was the guest speaker and gave a very interesting talk.

The Provincial President, Miss Jean Parker, gave a brief resume of the syllabus for the B.C. Convention to be held May 6-7, in Hotel Georgia, Vancouver.

At this meeting it was decided to join the Western Canada Dental Nurses' Association.

MILDRED ARMSTRONG

New Westminster Dental Assistants' Association

The Dental Assistants of New Westminster organized in the spring of 1948 and chose Miss Olive Trimble as their first President. Under her capable leadership the Association

was guided through its first year of "growing pains," and an instructive program of lectures, films, and discussions was instituted.

At the B.C. Dental Assistants' convention held in Vancouver in May 1949, the New Westminster Dental Assistants' Association

won the Wynne Saunders trophy for its presentation of a clinic on Economy.

Mrs. Earl Roberts was elected President in June 1949 and the Association continued to follow the established program. Short clinics conducted by individual members gave added interest to the monthly meetings.

BRITISH COMMONWEALTH NEWS

GREAT BRITAIN

Private Practice

It is probably the case that in some areas of the country practice is almost wholly confined to Health Service patients but it is also true that in other districts there remains a not inconsiderable proportion of patients who prefer, for various reasons, to be treated as private patients. Some dentists deliberately endeavour to limit the demands upon their time by reserving a definite number of hours in each week for private work. Others again have aimed at redressing the balance of the Health Service, so far as their own practices are concerned, by accepting for treatment under the Service only children and adolescents and patients who have received regular dental attention in the past. When allowance is made for all these various factors it is obvious that the amount of treatment which is given privately constitutes a by no means negligible addition to the immense volume of work carried out in the General Dental Service. There is, too, some evidence that the pressure on the time of dentists in the Health Service has led some patients to seek treatment from practitioners who have remained outside the Service. The latter, therefore, have found that on balance their abstention from participation in the new service has had little effect on their practices and they, doubtless, congratulate themselves on their freedom from the restrictions imposed upon their less fortunate colleagues by the General Dental Services Regulations. It is indeed possible that some of them would be opposed to the introduction of a system of grant-in-aid on the ground that the virtual supersession of the fixed scale of fees, inherent in such a system, would render it difficult for them to remain outside the Service.

It would be a mistake to suppose that the clients of private practitioners or those who express a desire to be treated as private pa-

tients by practitioners in the Health Service are solely or even mainly drawn from the higher income groups in the population. Economic causes operate to restrict the freedom of choice of large sections of the population, but innate conservation—using that term in its widest connotation—is in many cases the determining factor.

Schools Warned

On February 14, 1950, the Glasgow Daily Telegraph stated that the London County Council had advised the headmasters of 1,300 London Schools and through them the parents, that full dental service for school children cannot be provided.

It was explained that many dental officers had transferred to general practice and had left the school service inadequately staffed. It was pointed out that the children may be treated under the National Health Scheme, but warns parents that if the child is treated as a private patient parents would have to pay the bill.

Statistics

There are approximately 15,000 dentists included on the Register. It is probable that at the present time not more than 10,000 dentists are taking part in the General Dental Service. The majority of dentists admitted to the Register under the special provisions of the 1921 Act are now in the age-groups above 50 years with the result that the total number of names on the Register is heavily weighted in the higher age-groups. Losses through retirement will therefore be high during the coming years. The average entry rate to the Register is about 340 which is not sufficient to maintain the Register at its present strength. If the number entering the profession annually were to rise to 400 up to 1952 and 425 thereafter, it would still be about thirty years before the effective total of the profession would be

increased. This is an alarming forecast. The disturbing fact of this survey is that there are not enough dentists to meet the needs of more than half the population.—J. F. Pilbeam, F.D.S. R.C.S. Eng. in *Br. D. Jour.* March 3, 1950.

NEW ZEALAND

Social Security

In assessing the prospects for tax relief under the new National Government, prominent New Zealand economic experts say that allowance must be made for the dominion's heavy commitments to support the welfare state. The annual cost of social security benefits and pensions is nearly £50,000,000 (\$140,000,000), representing a tax charge of £26 (\$72.80) a head for every man, woman and child, or nearly £120 (\$336) a year, direct or indirect, for the average family in a total population of 188,123, including 114,250 Maoris.

Ten years ago, when the social security system was instituted, no one imagined that the cost would rise so much in so short a time. Social security benefits will continue, says the policy statement of the new government, but the National party will overhaul and strengthen the whole system of administration.—*New York Times* 99:2C *Journal* 18, 1950.

Training of Dental Nurses

The Department of Health, Wellington, has issued an interesting booklet on the training of the school dental nurse. Applicants must be over 17 years of age and they should have reached a standard of education not lower than the School Certificate. Training is free and student nurses receive a salary of £160 per annum. The course covers two years. The first year is spent in explaining the aims and objects of the New Zealand School Dental Service, the history of dentistry, ethics of nursing,

child welfare, hand work, hygiene, dental anatomy, anatomy, physiology, general pathology and dental surgery, dental pharmacology, use and care of dental instruments and equipment, preliminary operative dental surgery, local anaesthesia, extractions, the keeping of clinic records and a brief outline of orthodontics. The second year is devoted mainly to operative dentistry, organization and administration and dental health education. Students are also required to obtain a certificate in first aid. The subjects outlined constitute a course which demands intensive study but is essentially practical. A good deal of evening work is necessary throughout the two years' training. In addition to class examinations, qualifying examinations are held at the end of each six months. The final examination (written, oral and practical) is taken at the end of the second year. It is clear from the intensive training they receive that they are eminently suitable for the work they perform and are able to make a definite and valuable contribution towards raising the level of health of the children.

From the inception of the scheme in 1921 until March 31, 1949, 591 trained nurses have resigned. The average number of years of service (including two years' training) given by them was 7.88 years.—J. F. Pilbeam, F.D.S. R.C.S. Eng. in *Br. D. Jour.* March 3, 1950.

INDIA

Public Health

The total number of students attending the 20 medical schools in India is about 1,200. For a population of 300 millions the annual intake of 1,200 students for medical training is definitely low. Taking the population of India as 300 millions, the proportion of doctors to population (considering graduates and licentiates together) is approximately 1:6,300. In England and the United States of America the proportions are 1:1,000 and 1:750 respectively.

GENERAL NEWS

Basic Factors in Dental Service Trends

Condensed from editorial in N.Y. Jour. of D., March, 1950.

The question may well be asked can the public afford to pay for dental care under the present system of private practice. By way of

answer, it should be pointed out that more than 8 million families and single individuals in the United States received less than \$1,000 cash income in 1948, as stated in a report of the Subcommittee on Low-Income families of the Joint Committee on the Economic Report.

According to the Report, low-income families in America "... have been left behind in the economic progress ... some low-income families live at levels below even the most conservative estimate of the minimum necessary for health and decency." Almost one-third of the country's families and single individuals received less than \$2,000 in cash income in 1948.

According to the report, 9,120,000 families and individuals received between \$2,000 and \$3,000 a year; 13,780,000 families received between \$3,000 and \$5,000; 7,040,000 families between \$5,000 and \$10,000 and only 1,140,000 more than \$10,000. Expenditures for food take about half of the income of city families with less than \$2,000. Dentists, more than others, can well estimate how much dental care the foregoing families can afford. The answer is—not much. It is evident that these families need aid from some one if they are to receive dental care. It is our belief that the "someone" should not be the dentist as those who propose low fee schedules for population groups seem to think. We should not attempt to provide dental care by pauperizing the dentist.

What about our manpower? According to the Bureau of Economic Research and Statistics of the American Dental Association, 95 per cent of the total mean age of practising dentists lies between 48.3 years and 47.8 years, while the median age of the practising dentist today is about 48.07 years. When we take into consideration the fact that the average age of the total population of the United States is about 30 years, and that the number of practising dentists is steadily decreasing, we find that we have an aging as well as a vanishing profession.

What we now need is a definite program for practical application, in reply to the health planners whose experience lies in wishful-thinking.

Mexican Dental Association

The following officers of this Association were elected for 1950-1951:

Dr. Enrique C. Aguilar, President; Dr. Román S. de Lascrain, President-elect; Dr. Wilfrido Arias, Vice-President; Dr. Eugenio Vargas, Interior Secretary; Dr. Roberto M. Ruff, Foreign Secretary; Dr. Germán Sánchez Cordero, First Assistant Secretary; Dr. Pedro Martínez Garza Jr., Second Assistant Secre-

tary; Dr. Fermín Reygadas, Treasurer; Dr. Jorge de los Cobos, Assistant Treasurer; Dr. Manuel Vértiz, Council; Dr. Antonio Fragosó, Council; Dr. Adán Aguirre, Council.

Aptitude Testing for Dental School Entrance to Continue

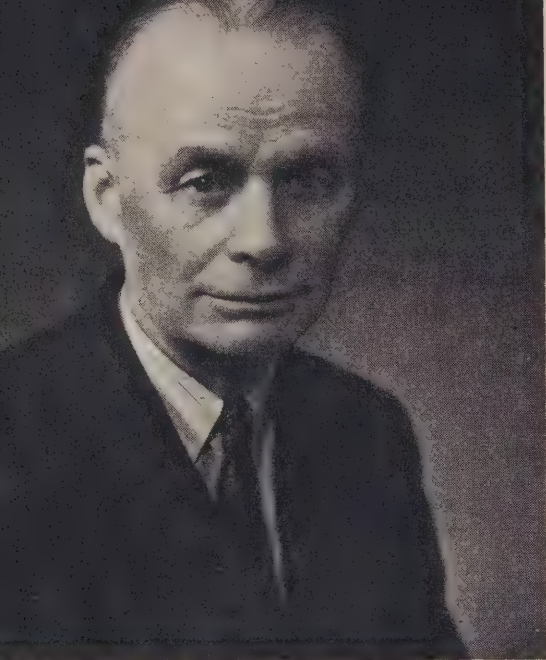
Specific plans for conducting aptitude tests for dental school applicants were reviewed and approved by the Council on Dental Education at its February 3rd meeting in the Central Office, noting that the first five-year program of such testing now nearing completion, resulted in marked success.

A.M.A. Dues

"The House of Delegates of the American Medical Association, supreme policy making body in American organized medicine, voted unanimously December 8 to establish annual dues of \$25 for its 142,000 active members. This is the first time in the AMA's 102-year history when membership in the AMA required the payment of dues of any kind. Membership previously became automatic in the AMA when a physician joined his local county society, which action also made him a member of his state medical society. The income from the dues, expected to be about \$3,000,000 a year, will be used, it was stated, to meet the constantly increasing responsibilities of the AMA on a broad front.

"The \$25 dues will be paid by the physicians to their local county medical societies, which will forward the money to the AMA. An active member who is delinquent in the payment of such dues for one year 'shall forfeit his active membership if he fails to pay the dues within thirty days after notice of his delinquency has been mailed to his last known address.' However, a delinquent member may be reinstated upon payment of his indebtedness.

"Until now the AMA operated largely on profits from the Journal of the American Medical Association. In 1948 it had a total income of \$1,767,425 and a total expenditure of \$1,368,455, leaving a balance of \$395,970. Its major expenditures went in the conducting of its various councils, bureaus and committees, which cost \$1,169,165, and for employees' group annuities, on which \$146,115 was spent."—*N. Y. Times* 99:35C. per *Public Health Economics*.



F. W. JACKSON, M.D., D.P.H.

director of health insurance studies in the federal Department of National Health and Welfare, has been awarded the 1950 gold medal of the Professional Institute of the Civil Service for his outstanding contributions to Canadian health and welfare services.

Dr. F. W. Jackson Receives Professional Institute Award

Ottawa, March 25.—Frederick W. Jackson, M.D., D.P.H., director of health insurance studies in the federal Department of National Health and Welfare, was today awarded the 1950 gold medal of the Professional Institute of the Civil Service of Canada for "the most outstanding contribution to national or world well-being."

The presentation, made by President G. E. B. Sinclair at the luncheon climaxing the Institute's 30th annual meeting, honoured Dr. Jackson for his activities and achievements as Manitoba's deputy minister of health and public welfare for 17 years and as federal government's director of health insurance studies for the past year and a half. In the latter capacity he has administered Canada's \$31-million-a-year National Health Program for the development and extension of health services.

A gold medal is presented annually by the Professional Institute to a Canadian public servant whose contributions in pure or applied science or to national or world well-being are regarded by a panel of judges as being of outstanding importance. Judges for the 1950

award were the Hon. Mr. Justice R. L. Kellock of the Supreme Court of Canada, Dr. Charlotte Whitton, C.B.E., noted writer and social worker, and Dr. Arthur Beauchesne, C.M.G., K.C., eminent authority on parliamentary procedure.

The judges referred to Dr. Jackson's achievements as deputy minister of health and public welfare in Manitoba, including his successful initiation and development of what is known today as the Manitoba Health Plan, as "an outstanding contribution in the field of health and public welfare." Reference was made to his administrative abilities, his development of a comprehensive public health program, his welfare activities, his efforts to prevent disease and his contributions to medical education.

At various times in his career Dr. Jackson has served as professor of preventive medicine at the University of Manitoba, president of the Canadian Public Health Association, president of the Conference of State and Provincial Health Authorities of North America, chairman of a royal commission investigating the health and welfare of the Japanese in the interior of British Columbia and as Canadian representative to the World Health Organization in Geneva.

Dr. Jackson is a recipient of the King George V Silver Jubilee Medal and the King George VI Coronation Medal for meritorious public service.

Income of Dentists in U.S.A.

The net income of the practicing dentist in the United States in 1948 averaged \$6,912. This information is revealed in a survey made by the Office of Business Economics of the United States Department of Commerce, of the 78,000 dentists engaged in civilian practice. The earnings of dentists in 1948 were 60 per cent above the 1929 level, and 80 per cent above the prewar high attained in 1941.

Independent dentists had average net incomes of \$7,047, compared with \$5,358 for salaried dentists, the study shows. About 92 per cent of all civilian dentists derived most of their professional income from independent practice, while only 8 per cent were salaried.

Slightly more than 2 per cent of every 10 dentists earned less than \$3,000. A similar proportion reported net incomes in excess of \$10,000. The remainder, or nearly 6 out of

10 dentists, earned between \$3,000 and \$10,000.

It was found that, on the average, dentists practicing in cities having between 25,000 and 250,000 population (that is, in middle-sized cities) earned more than dentists in either very small communities or in metropolitan centres. In fact, on the average, dentists in the largest cities earned less in 1948 than dentists in any but small rural communities.

New York City (with almost one-ninth of the nation's dentists in 1948) had a lower average dental income than the national average for all dentists. Philadelphia and Chicago also had dental incomes below that for the country as a whole. Of the large cities studied, only San Francisco and Los Angeles had average incomes substantially above the national average.

Those with one employee (roughly 4 out of every 10 dentists) earned more than twice as much as those having no employees (also roughly 4 out of 10 dentists). Dentists with 5 or more employees had an average income 5 times larger than dentists without employees.

The small number of dentists who were fully specialized earned net incomes about 75 per cent larger than did the general practitioners, but the gap between these two groups narrowed substantially during the past decade.

Although only about 3 per cent of the independent practitioners were found to be in partnerships; those who practiced in this manner tended to have somewhat higher incomes.

Income and age were found to be closely correlated. Average income increased sharply as age increased, until a peak average income of \$9,117 was reached for dentists 40-44 years of age. Beyond that point average income declined steadily.—*N.Y. Jour. of D.*

Second Series of Courses by Telephone Offered in 1950-51

As a result of the success of its first post-graduate course transmitted by telephone to dental societies from coast to coast, the University of Illinois College of Dentistry will offer a second series of round table symposia on five different phases of dentistry this year and next.

A combined membership of more than 7,000 in 169 societies are now enrolled in the series.

Though the general topic, "Current Ad-



JAMES SCOTT, 1770-1828

First Resident Dentist in Glasgow, Scotland.

from a contribution by J. Menzies Campbell, F.R.S.E., D.D.S., L.D.S., F.I.C.D. of Glasgow.

By courtesy of the Glasgow Dental Hospital and School per Dental Mag. and Oral Topics.

vances in Dentistry," remains the same, new subjects and an entirely different faculty have been chosen for the two-hour lectures which, in the new series, will be given once a month from November 1, 1950, through March, 1951.

Essay Competition

The following subject has been chosen by the C.D.A. War Memorial Scholarship Committee for competition for the 1950-1951 session,—“An Evaluation of the Natural Defences of the Mouth.”

The subject for this year's competition is “The Control and Elimination of Pain in Dental Procedures.” The judges for this year are: Dr. Thomas Cowling of Toronto, and Doctors A. Gerard Racey and Gerard de Montigny of Montreal.

IN MEMORIAM

Thomas Cowling of Toronto, Ontario, died suddenly at his home on April 17.

The passing of Dr. Cowling has just occurred as this issue goes to press. Further obituary will appear in the next edition of this Journal.

•
Arthur Jobin of Winnipeg, Manitoba, aged 43, died suddenly April 16. He was graduated from the University of Minnesota and since then had practised in Winnipeg.

He was a member of St. Charles Country Club, Knights of Columbus and Winnipeg Winter Club.

Dr. Jobin is survived by his widow, a son and two daughters.

•
Percy R. Howe of Boston, Mass., president of the A.D.A., in 1929-30 and notable pioneer in dental research, died February 28. He was 85 years old. Dr. Howe was director of the Forsyth Dental Infirmary for Children in Boston. He was one of the three persons to be awarded the A.D.A.'s plaque for outstanding contributions to the advancement of dentistry and was the only one to receive the award in person.

•
Harold Vincent Driver, a prominent Montreal dentist, died suddenly at his home on March 19.

He was graduated from McGill University with the degree of D.D.S. in 1914 and was a member of the teaching staff of the University's Faculty of Dentistry for twenty years.

He served one year in Canada and two in England as a Captain in the C.A.D.C. during the first World War. In the Second he was promoted to the rank of major in June, 1940, and to that of lieutenant-colonel in March, 1942. He was appointed District Dental Officer for M.D. No. 4 in June, 1940, and held that post 4½ years, resigning early in 1945 following a heart attack while on duty.

In 1946 the Montreal Dental Club, of which he was a past president, made him an honorary member for outstanding services rendered to McGill University and to the Canadian dental profession.

Dr. Driver was a member of the Graduates' Society of McGill University, the Canadian Dental Association, the Canadian Legion and the Antiquarian and Numismatic Society. He was also a member of Calvary United Church for 35 years, 13 of which he served as secretary. He was a member of the church's board of trustees for several years. He was also a life member and past Master of Westmount Lodge, A.F. & A.M. No. 76, Royal Albert Chapter of R.A.M. No. 8.

Dr. Driver is survived by his widow, one daughter, and a sister.

•
Bernhard Gottlieb, M.D., L.L.D., D.M.S., died suddenly in April.

He was educated as a physician but soon gravitated to Dentistry and became a great educator and research worker. After leaving Vienna he continued his investigations in Palestine, then at Ann Arbor, Mich. and latterly at Baylor University in Texas.

His theories on the continuous eruption of teeth and the epithelial attachment of enamel are now widely accepted.

It was his ambition to see an outstanding Faculty of Dentistry established in the Hebrew University in Palestine and privately aided and supported worthy European students who came to the United States to study.

Dr. Gottlieb is survived by his widow and one son.

•
Eric Lyons Young of Ottawa, Ontario, died March 25. He had retired from practice in December 1948 due to illness.

Dr. Young was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1910. He began practice in Ottawa in 1920, after serving with the Canadian forces during World War I. In World War II he was a Captain in the Canadian Dental Corps.

He was a member of Plantagenet Masonic Lodge of Riceville, the Lodge of Perfection and the Murray Croix Chapter. He was also a member of Rivermead Golf Club.

Dr. Young is survived by his widow, two brothers and five sisters.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

MAI, 1950

NO 5

NUTRITION ET CARIE DENTAIRE*

Interprétation du rôle de l'alimentation dans la pathogénie de la carie dentaire

par H. SIMONNET, Paris, France,
membre de l'Académie Nationale de Médecine (Paris),
fellow of the Royal Society of Medicine (London),
professeur invité de l'Ecole d'Hygiène de l'Université de Montréal.

Dans nos précédents entretiens, nous avons recherché parmi les faits d'observation et d'expérimentation, quelles étaient les raisons qui pouvaient militer en faveur d'un rôle favorisant ou déterminant de l'alimentation dans la pathogénie de la carie dentaire.

Je vous ai présenté une revue évidemment incomplète, tant les travaux sur la question sont nombreux et conduisent souvent à des conclusions hésitantes ou contradictoires, que je me suis gardé de vous dissimuler. Je crois que cet exposé est cependant assez compréhensif, pour que nous puissions dégager des indications utiles sur la participation de l'alimentation dans la production et le développement de la carie.

Mais tout d'abord, quelques remarques préliminaires doivent être faites. Je pense qu'il est indiscutable que l'alimentation peut être tenue pour responsable, au moins en partie, de l'évolution de la carie dentaire. Toutes les observations que nous avons rapportées le prouvent sura-

bondamment; certaines de ces observations ont la valeur d'expériences:—

Si la consommation d'un régime bien équilibré, au sens où nous l'entendons actuellement, n'est pas un garant absolu contre la carie; si inversement, des régimes défectueux ne sont pas nécessairement accompagnés toujours de carie; l'association entre certaines fautes alimentaires et la fréquence de la carie est trop étroite pour qu'une relation ne soit pas admise. Il ne me paraît pas possible d'accepter la conclusion de Simmond (1) "the low incidence of caries among native populations of the world has not been the result of any one regimen".

Je vous rappellerai seulement que les observations de Clapp (2) relatives à l'état des dents et à la fréquence de la carie chez les adolescents, les uns nés en Italie et élevés aux Etats-Unis, mais avant conservé leurs coutumes nationales d'alimentation et chez les adolescents d'origine européenne ou américaine, mais nourris selon les habitudes américaines.

*Ce travail constitue la dernière d'une série de quatre conférences données sous les auspices de l'Ecole d'Hygiène de l'Université de Montréal, les 10, 17, 24 novembre et 1er décembre 1949. Les trois premières traitaient respectivement: 1) des données anatomiques et biochimiques concernant la dent; 2) des faits d'observation récents; 3) des faits d'expérimentation relatifs à l'influence de l'alimentation sur le développement de la carie. Cette dernière conférence constitue une vue d'ensemble sur les faits les plus importants exposés dans les trois premières et une conclusion. Elle a été reconstituée par notre confrère, H. Charette.

Par quelle voie l'alimentation peut-elle influencer la dent et intervenir dans le déterminisme de la carie? La dent peut être atteinte par deux voies: la voie interne et la voie externe.

a. L'alimentation, par l'intermédiaire des produits du métabolisme, en excès ou par défaut, peut toucher la dent, dans la mesure où ces modifications l'atteignent et où la dent est sensible aux variations de la composition du sang ainsi que dans la mesure où la composition de la salive peut être modifiée par l'alimentation et où la dent est sensible à l'action de la salive.

b. L'alimentation peut aussi intervenir par contact direct avec l'organe dentaire dans le temps où les aliments séjournent dans la bouche; elle peut agir encore d'une manière indirecte par son influence sur la sécrétion salivaire.

Mais la susceptibilité de la dent aux diverses agressions auxquelles elle est exposée au cours de son évolution est très inégale. Il faut en effet opposer la dent en maturation et la dent adulte.

Durant sa formation, la dent est très susceptible vis-à-vis de toutes les modifications métaboliques. (3) La dent cependant réagit moins que l'os, mais les défauts qui se produisent dans sa structure durant sa formation, sa maturation, y restent ensuite fixés. Evidemment, avant son éruption, elle est mécaniquement protégée contre les agressions extérieures directes.

Au contraire, une fois qu'elle a complété son développement et qu'elle a fait son éruption, la dent est probablement la structure de l'organisme la moins sensible aux modifications métaboliques. A ce moment, elle est réceptive aux actions locales en fonction des qualités de ses diverses formations et notamment de l'émail; aussi du fait que, contrairement à l'opinion généralement admise, elle n'est pas rigoureusement indifférente au milieu buccal. Il se produit en effet des échanges d'ions entre l'hydroxy-apatite et le milieu buccal: le radical OH peut être remplacé par Cl, F. et les ions Ca par Mg, Na, Si, Ba.

La dent est perméable aux substances dissoutes. Cette perméabilité a été observée en ce qui concerne l'émail, a) vis-à-vis de colorants organiques apparemment par la voie de la matière organique des lamelles et des gaines des prismes, b) vis-à-vis des sels minéraux. L'émail des dents de l'homme, du chien, du veau, est perméable à l'eau, au chlorure de sodium ou de potassium, et plus lentement au chlorure de calcium. La perméabilité diminue avec l'âge; elle est accrue pour les dents d'animaux ayant subi des carences minérales ou de vitamine D. H. Klein (4) estime que l'émail est perméable aux cations, que le passage des anions est plus lent du fait de la charge négative de ses parois, mais que si la charge est renversée par des ions H, par exemple, la diffusion ionique est modifiée dans le sens correspondant.

Sur la dent en place et adulte, la perméabilité existe aussi. Elle a été étudiée et observée dans le cas du nitrate d'argent. La perméabilité paraît accrue notablement quand la couche superficielle calcifiée de l'émail est altérée et que les extrémités des prismes de l'émail sont exposées. La perméabilité de l'émail, qui paraît se produire par la voie de la substance organique, se modifie progressivement, la matière organique de la dent se transformant lentement mais progressivement dans le sens d'une déshydratation qui la rend moins perméable.

On peut donc conclure schématiquement que l'alimentation interviendra pendant la période de formation de l'organe dentaire en tant que facteur prédisposant. Elle ne constituera pas une cause directe, déterminante de la carie. Sur la dent qui a fait son éruption, l'alimentation pourra jouer un rôle favorisant et éventuellement un rôle déterminant. En d'autres termes, nous pensons en ce qui concerne l'alimentation, qu'elle ne peut jouer un rôle déterminant, si elle en joue un, que par la voie externe. Nous attribuons donc à l'environnement de la dent le rôle de facteur déterminant; les qualités de la dent acquises pendant sa formation se comportant comme des facteurs prédisposants.

INFLUENCE DE L'ALIMENTATION SUR
LA STRUCTURE DE LA DENT PAR LA
VOIE INTERNE.

L'influence de l'alimentation solide ou liquide sur la formation de l'organe dentaire est un cas particulier de la participation de l'alimentation à la constitution du terrain. L'alimentation ne paraît pas capable d'influencer la différenciation de la lame dentaire primitive et secondaire, des bourgeons dentaires, des germes dentaires, des adamantoblastes et des odontoblastes. Nous en ignorons le mécanisme. Ces phénomènes initiaux se laissent classer parmi les facteurs héréditaires, ce qui est vrai, . . . commode . . . mais n'explique rien.

Plus tard, quand les cellules formatrices de l'émail et de la dentine auront acquis leur différenciation morphologique et fonctionnelle, elles deviendront sensibles aux modifications du milieu intérieur dont elles dépendent. A ce moment, dans la mesure où l'alimentation peut influencer directement ou indirectement la composition du milieu intérieur, elle pourra influencer la formation de l'émail et de la dentine. Ces tissus en effet se comportent comme des éléments glandulaires qui sécrètent une matrice organique, qui se calcifiera secondairement.

L'alimentation peut alors intervenir de deux manières. Elles peut limiter la quantité des matériaux nécessaires à l'édification de la dent et qui sont mis à la disposition des cellules formatrices : carences. Elle peut apporter des matériaux nuisibles à la formation des tissus de la dent ou à leur entretien : actions toxiques.

Faisons encore deux remarques d'ordre général. En ce qui concerne les carences, pour qu'elles puissent exercer une action positive, il faut admettre que la compétition entre la dent et le tissu osseux ne se résout pas au pro rata des besoins absolus de ces formations. L'ensemble des dents exige pour se former environ le centième de la quantité de calcium et de phosphore qui sont nécessaires pour le tissu osseux. En ce qui concerne les excès éventuels de matériaux utiles, il faut souligner qu'ils ne constituent pas un facteur favorable; pas plus d'ailleurs que

dans toutes les autres circonstances : croissance générale ou fonctions particulières dans lesquelles on a tenté de les utiliser. A partir du moment où les besoins normaux sont satisfaits, l'excès d'un matériau nutritif n'exerce aucune influence favorable; au contraire il peut être défavorable.

CARENCES.—Les matériaux alimentaires dont la carence peut être prise en considération sont évidemment ceux qui interviennent à des titres divers dans la formation de la dent, soit comme constituants des structures minérale ou organique, soit comme substances fonctionnelles : enzymes, catalyseurs ou inhibiteurs. Parmi les constituants minéraux, on retiendra principalement le calcium, le phosphore et le fluor. Parmi les vitamines : la vitamine A, la vitamine D et peut être la vitamine E et la pyridoxine. Les rôles des acides aminés indispensables à l'élaboration de la matrice organique ne paraît pas avoir été étudié. La carence d'iode pourrait être prise en considération du fait que l'insuffisance thyroïdienne s'accompagne d'un retard de l'évolution de la dent.

Les matériaux dont la présence en excès peut être envisagée sont : certains éléments minéraux, fluor, manganèse; la vitamine D aux doses très élevées; et les glucides.

Carences minérales.—La plus importante d'entre elles est la carence de calcium. Pratiquement il est impossible de la considérer seule. Car elle est influencée par l'apport concomitant de phosphore et l'apport de vitamine antirachitique. Mais le résultat final est le même, que ces autres facteurs interviennent ou non. Ils accentuent les effets de la carence de calcium, s'il y a en même temps carence de vitamine D, carence de phosphore ou excès de phosphore; ils les atténuent, s'il y a présence de vitamine D, présence d'une quantité optimum de phosphore ou si le rapport Ca/P est voisin de 1.5 à 2.0. La carence ou mieux l'insuffisance du fluor constitue aussi un facteur de première importance dont l'influence sur la résistance de la dent à la carie est bien mise en évidence par les faits d'observation comme par les faits d'expérience.

Carences vitaminiques.—Dans le cas des vitamines, nous retiendrons la carence de vitamine A et la carence de vitamine D. La carence de vitamine A touche électivement l'organe de l'émail et aboutit à l'hypoplasie de l'émail. La carence de vitamine D qui trouble la calcification aboutit à l'hypocalcification de l'émail. Pratiquement ces deux carences sont souvent associées, et les altérations qu'elles provoquent, même discrètes, doivent être prises en considération. Malgré son influence remarquable sur les structures de la cavité orale nous ne retiendrons pas la carence de vitamine antiscorbutique qui ne touche pas directement l'émail puisqu'elle fait sentir son action primitive exclusivement sur les formations d'origine mésentérique. Nous sommes trop peu informés sur les effets de la carence de vitamine E, qui est réputée frapper directement l'organe de l'émail (5), pour la retenir.

Ces diverses carences, isolées ou associées par des mécanismes, qui nous échappent le plus souvent, pourront modifier, 1°. la composition chimique, les matériaux organiques peut-être, mais la composition minérale certainement de la dentine et de l'émail; 2°—la structure physique, notamment l'arrangement des cristaux des prismes de l'émail et partant la conformation de la dent.

Du point de vue de la morphologie de la dent les défauts résultent souvent du mode de fusion des centres de croissance qui se produit durant le développement de la dent au cours de sa différenciation morphologique (6). Ce mode de fusion est généralement considéré comme relevant de facteurs héréditaires; il n'est pas exclu que les conditions de nutrition, par les facteurs qui influencent les épithélia, comme la vitamine A, ne puissent intervenir. L'intérêt de ces modifications réside dans la production de points de moindre résistance relevant surtout de la perméabilité physique, de la facilité plus grande de décalcification, de la moindre résistance mécanique.

L'influence de substance présentes en excès ne nous retiendra qu'en ce qui concerne le cas le plus épineux, celui des glucides, qui a donné lieu à des contro-

verses assez vives du fait que, à côté du souci de la santé, d'autres préoccupations sont en jeu. Nous examinerons dans un moment les arguments concernant l'action locale des glucides. Recherchons si les faits d'observation ou d'expérience permettent de soutenir la réalité d'une action interne. L'argument le plus solide en faveur d'une action métabolique des glucides résulte des enquêtes faites à l'occasion des guerres mondiales (7).

La réduction marquée de la carie dentaire en Europe après les deux grandes guerres ne peut pas être entièrement expliquée par la diminution des glucides (il y a eu bien d'autres modifications dans les conditions de vie). En Norvège, le début brusque des restrictions alimentaires et la constance des réductions pendant la période 1940-1944 s'opposent aux caractères de la réduction de la carie dentaire qui est progressive et surtout tardive. s'il s'agissait d'un effet direct sur la cavité buccale, la réduction de la carie aurait dû être évidente au bout d'un ou deux ans chez tous les enfants porteurs de dents récemment sorties; indépendamment du fait que les dents aient été formées avant ou après le début des restrictions. La longue période de latence qui précède la diminution des caries est due d'après Sognnaes (8) à ce que les régimes de guerre ont permis la formation et la maturation de dents moins sensibles au développement de la carie. Ce temps de latence a été observé non seulement en Norvège, pendant la deuxième guerre mondiale, mais aussi à l'occasion de la première et de la seconde guerre dans dix contrées d'Europe. Nous ignorons tout du mécanisme de cette action.

Si l'action de ces facteurs prédisposants ne fait pas de doute, si la réalité de leur intervention ne peut pas être négligée, notamment du point de vue prophylactique, il faut reconnaître que cette manière de voir repose surtout sur des faits expérimentaux et que leur mise en évidence clinique est difficile. Les constatations les plus sûres à ce point de vue sont celles qui relient la fréquence de la carie dentaire au rachitisme; non pas nécessairement au rachitisme floride mais au rachi-

tisme sub-clinique encore très fréquent. Les observations anciennes de Gottlieb (9), qui datent de 1920, soulignent les relations entre la dégénérescence des améloblastes et l'hypoplasie de l'émail. Les expériences et les patientes observations de Lady Mellanby mettent aussi en évidence la relation entre l'hypocalcification résultant de fautes alimentaires (carence de vitamine lipo-solubles principalement) et la carie dentaire. En 1941, Lady Mellanby (10) conclut que la carie est fréquente et étendue dans 7 p. 100 des dents bien formées, c'est-à-dire dont l'émail est bien formé, dans 74 p. 100 des dents atteintes d'hypoplasie de l'émail c'est-à-dire d'hypocalcification. De ce point de vue, je voudrais appeler votre attention sur la période de susceptibilité des dents permanentes qui s'étend, suivant les dents, du milieu de la vie intra-utérine à l'adolescence. Pendant la grossesse et à un degré moindre pendant l'allaitement, la mère, dans ce cas comme dans celui des autres structures en voie de développement, constitue un facteur de sécurité sur l'importance duquel on ne saurait trop insister. Plus tard et notamment jusqu'à l'âge de dix ans c'est l'alimentation de l'enfant qui doit être très étroitement surveillée.

INFLUENCE DE L'ALIMENTATION SUR LA STRUCTURE DE LA DENT PAR LE MILIEU BUCCAL

Examinons maintenant la part que l'alimentation peut prendre dans le déterminisme de la carie par le moyen du milieu buccal. Ici encore l'alimentation ne constitue pas le facteur déterminant de la carie, mais elle intervient à des titres divers pour permettre ou faciliter l'apparition ou le développement de cette maladie post-éruptive, acquise, à caractère évolutif qu'est la carie dentaire. Pour traiter convenablement de cette question, il conviendrait de vous rappeler les théories pathogéniques de la carie. Cet exposé nous entraînerait trop loin et nous avons déjà fait trop de digressions.

La conception en vogue actuellement est celle de la décalcification initiale. Cette théorie qui a été émise par Tomes en 1859 et développée par Miller en 1890

repose principalement sur la production d'acides par divers micro-organismes. Cette flore acidogène et acidophile est extrêmement variée et variable. Un des germes les plus fréquemment rencontrés est le *Lactobacillus acidophilus*, différent du Lactobacille de l'intestin. On le dénomme souvent l'*acidophilus odontolyticus*. Il y en aurait classiquement au moins deux variétés. Dans la bouche il serait du type Y "smooth", au contraire du Lactobacille de l'intestin qui est du type X "rough" (11). On a décrit d'autres germes acidogènes: *Str. salivatus* parfois plus abondant que le Lactobacille, des cocci Gram négatifs, des leptothrix, des levures, des sarcines, etc. (12).

La décalcification selon cette conception précède la destruction de la matière organique. Bien que cette théorie paraisse constituer une sorte de dogme, elle ne rend pas caduque la participation de la partie organique de la dent qui peut, dans la conception développée par Gottlieb depuis 1921, constituer le stade initial de la carie, surtout dans les formes où la dentine paraît être le siège initial des lésions. Dans ce cas, les germes protéolytiques seraient les premiers à entrer en jeu, les acidogènes décalcifiants intervenant ensuite. Outre divers arguments directs, cette manière de voir est soutenue par le fait que l'émail atteint par la carie ressemble plus en ce qui concerne la biréfringence, à celui dans lequel la matière organique a été détruite qu'à celui dans lequel la décalcification a eu lieu.

Je voudrais également appeler votre attention sur un très récent travail de Pincus (13). L'auteur fait remarquer que dans les fentes occlusales la carie ne se produit pas dans la partie supérieure de la fente où les débris alimentaires peuvent se loger facilement, mais dans la partie profonde où la membrane Nasmyth et la protéine de l'émail peuvent persister et protéger l'émail contre les lactobacilles. Il admet que la destruction de l'émail est le fait d'un germe du type *Proteus*, Gram négatif, producteur d'une sulfatase qui décompose la protéine et la membrane de Nasmyth, une chondro-protéine mettant en liberté à partir de l'acide chondroitine-sulfurique que existe dans ces sortes de

protéines conjuguées à l'acide sulfurique. Ce germe réunirait deux propriétés jusqu'ici généralement considérées comme appartenant à des microbes différents: une action protéolytique et une action acidogène conduisant à un acide minéral: l'acide sulfurique.

Ces diverses conceptions ne sont pas exclusives l'une de l'autre. Au contraire, il paraît raisonnable d'admettre que les facteurs déterminants de la carie sont représentés par des micro-organismes évidemment apportés par les aliments, mais qui trouvent pour des raisons variées les conditions nécessaires à leur développement local à leur persistance, favorisés ou non par des défauts de la structure dentaire. En effet, pour que l'action de ces micro-organismes, quels qu'ils soient, puisse s'exercer et soit productrice de carie, il est nécessaire que les conditions particulières permettent leur développement et leur localisation au contact de la dent.

Examinons de quelle manière l'alimentation peut intervenir dans ces divers processus; dans quelle mesure son action est favorable ou défavorable. Les micro-organismes, causes de la carie, de quelque nature qu'ils soient, proviennent du milieu ambiant. Leur pénétration dans la cavité buccale peut se produire dès la naissance comme pour le reste du tube digestif. La contamination est ensuite permanente; et l'alimentation représente évidemment une cause importante de contamination, qu'elle se réalise par les aliments eux-mêmes ou par les divers ustensiles qui sont utilisés pour la consommation des aliments.

Mais une importante question se pose. Les germes responsables de la carie sont-ils des germes banaux, acquérant du fait des conditions locales un pouvoir pathogène spécifique? Constituent-ils, au contraire, des races spécifiquement adaptées à la vie dans la cavité buccale et à l'attaque de la structure dentaire? Par les tests d'agglutination croisée, Streat (14) constate que les divers lactobacilles isolés dans la carie contiennent 10 antigènes différents. Cet important problème qui ne paraît pas avoir été résolu présente un réel intérêt. La solution, qui lui serait

donnée, permettrait de répondre à la question du caractère épidémique que nombre d'observations permettent d'attribuer à la diffusion de la carie et sur lesquelles j'ai, à plusieurs reprises, appelé votre attention. En ce qui concerne les germes du genre *Lactobacille* et les germes acidogènes en général, il est facile, mais non prouvé, de tracer leur origine dans certains aliments plus ou moins riches en ferments lactiques: les laits fermentés, les fromages fermentés, etc. Pour les autres germes, leur origine alimentaire commune est possible, mais la réalité de leur présence dans les aliments demanderait confirmation. Un autre mode de transmission doit être recherché.

Pour exercer leur action ces germes doivent trouver des substrats appropriés. Dans le cas des protéolytiques, des sulfagènes, le substrat se trouve dans la dent elle-même: protéine de l'émail et les glyco-protéines. L'alimentation dans ce cas ne joue pas un rôle important. Dans le cas de lactocidogènes, au contraire, le substrat ne se trouve pas dans la dent normale. Il provient de l'alimentation. Ce sont des sucres fermentescibles apportés en nature par l'alimentation ou formés à partir de polysaccharides, non directement fermentescibles et contenus dans l'alimentation.

La transformation des glucides en acides organiques est un processus enzymatique déterminant ce que l'on est convenu d'appeler la phase anaérobie de la dégradation du glucose et autres hexoses, laquelle aboutit à la formation d'acides divers: acide lactique principalement, acide phosphoglycérique, pyruvique, formique, propionique, butyrique. L'action des enzymes microbiens et accessoirement des enzymes dérivés des tissus de la cavité buccale et peut-être de la salive s'exerce sur les glucides-substrats, dans la cavité buccale elle-même, au contact de la dent et dans la dent elle-même.

L'action dans la cavité buccale pour certaine qu'elle soit n'en est pas moins d'importance secondaire. Les sucres ne séjournent pas longtemps dans la bouche; le pouvoir tampon de la salive neutralise facilement les petites quantités d'acides

au fur et à mesure de leur formation. L'action au contact de la dent est favorisée par les dispositions anatomiques et les propriétés des aliments dont nous parlerons plus loin pour la formation des plaques dentaires. L'action dans la dent elle-même résulte de la remarquable propriété de l'émail d'être perméable aux sucres. En effet toutes les parties de la dent sont perméables aux divers sucres et ceci dans la mesure, semble-t-il de leur solubilité (15).

Cette pénétration des sucres dans la dent est intéressante à divers titres. Elle permet de penser, que l'action enzymatique acido-formatrice est capable de s'exercer au sein même de la dent, même si les microbes ne s'y développent pas. Une telle pénétration est d'autant plus vraisemblable et possible que le glucose facilite le passage dans la dent de composés azotés qui en son absence ne peuvent pas y pénétrer. Ainsi en solution aqueuse la toxine tétanique ne pénètre pas l'émail, tandis que dissoute dans une solution concentrée de glucose elle atteint la pulpe. (16). On peut encore rappeler que les sels de Ca sont sensiblement solubles dans le glucose et le saccharose avec lesquels ils forment des combinaisons définies: le gluconate de calcium, par exemple.

Ajoutons encore à la charge de l'alimentation le fait qu'elle peut apporter des acides préformés: CO_2 des boissons gazeuses souvent d'ailleurs acidulées pour les rendre plus piquantes, PO_4 , H_2SO_4 , H_2A , acides organiques naturellement contenus dans les jus de fruits et surtout artificiellement introduits dans les bonbons acidulés. De tous ces acides organiques, l'acide citrique paraît être le plus nocif. Sans doute cette action est-elle généralement temporaire; mais ces acides ne peuvent-ils pas diffuser aussi dans la dent comme les sucres? Et l'acidification du milieu qu'ils déterminent est certainement favorable au développement et à la persistance du lactobacille.

J'ai insisté à l'occasion sur l'importance des facteurs mécaniques dans la production de la carie. L'action traumatisante des aliments exigeant un broyage par les molaires est mis en évidence par de nombreuses expériences. L'alimentation in-

tervient aussi mécaniquement dans la constitution des amas de particules organiques qui se logent dans les infractuosités et les interstices dentaires, et dans la constitution des plaques dentaires.

Toujours dans le cadre des actions mécaniques, mais en faveur de l'alimentation signalons: l'action mécanique de nettoyage que la mastication réalise surtout quand l'alimentation comporte des matériaux résistants; la gymnastique fonctionnelle qui prévient l'odontoporese par défaut d'usage, à laquelle H. H. Neumann (17) attribue une importance plus grande qu'à toutes les autres causes réunies; ce qui paraît quelque peu exagéré. Ce point de vue, qui rappelle celui que soutenait Beltrame de Marseille, ne doit cependant pas être négligé. Il oppose l'alimentation des peuples civilisés et des individus qui y sont soumis par habitude ou par nécessité à l'alimentation des populations moins évoluées.

Salive. — L'alimentation exerce encore une autre influence importante sur la salive. Cette action est directe sur la sécrétion et indirecte quant à sa composition. L'action directe résulte, 1°. de la stimulation de la sécrétion provoquée par la mastication, phénomène purement mécanique bien connu des physiologistes, 2°. de l'influence de la nature des aliments sur la sécrétion: action stimulante des aliments secs, acides, amers et sucrés. L'action stimulante sur la sécrétion salivaire permet à la salive d'exercer ses multiples actions d'une manière plus intense: action mécanique du lavage, action physique de dissolution facilitant l'entraînement hors de la cavité buccale, action chimique de neutralisation, action biologique bactéricide. La capacité des germes à se développer dans la bouche est certainement influencée par les propriétés bactéricides de la salive qui sont normalement très intenses chez le chien.

Cette propriété a été rapportée à la présence du lysozyme dont le taux diminuerait dans la carence de vitamine A. La salive par ailleurs contient au moins chez l'homme un enzyme amylolytique: la ptyaline. Sur une base théorique, sans preuves directes, cette action amylolytique s'exerçant sur les dextrines, amidons et

fécules, constitue évidemment un facteur défavorable; puisqu'elle accroît la quantité de sucres fermentescibles, substrats à partir desquels se formeront les acides. Peut-être la résistance du chien à la carie tient-elle à ce que la salive de cet animal ne contient pas de ptyaline, ou à la présence du lysozyme?

L'alimentation peut-elle exercer une action indirecte sur la composition de la salive? La composition et les diverses propriétés de la salive sont peu modifiées par l'alimentation. L'élimination d'urée qui peut être une source d'ammoniaque utile pour la neutralisation des acides n'est accrue que dans certains états pathologiques. En ce qui concerne, l'élimination de phosphates de calcium, facteur du pouvoir tampon de la salive, les avis sont partagés. Pour certains, l'alimentation exerce une action nette: on pourrait arrêter l'évolution de la carie en rendant le régime plus alcalogène, pour d'autres ces modifications de l'équilibre acide-base sont inopérantes.

L'alimentation peut exercer une influence indiscutable par l'apport du f l u o r. De nombreux faits d'observation et d'expérience prouvent l'action favorable du fluor dans la prévention de la carie, qu'il s'agisse d'un apport naturel par l'eau de boisson ou par les aliments solides ou d'un apport artificiel par renforcement de la teneur de l'eau en fluor ou d'applications topiques de fluor en solution.

Le mode d'action du fluor est encore discuté. On a mis en cause l'action anti-fermentaire que le fluor exerce et plus particulièrement sur la phosphatase; on a pensé à une action directe sur l'émail, provoquant sa stabilisation par échange d'ions (Fl se substituant à CH dans l'apatite). L'examen de la dent au microscope électronique révèle que la surface de l'émail se modifie et qu'il apparaît des cristaux de fluo-apatite insoluble (18).

L'alimentation peut encore intervenir par l'apport de calcium. Les eaux calcaires exercent une action préventive vis-à-vis de la carie.

Enfin l'alimentation peut exercer des actions favorables par des moyens purement physiques. Les lipides sont con-

sidérés comme capable de former à la surface de la dent un enduit protecteur qui expliquerait pour une bonne partie l'action favorable des huiles de foie de poissons ou du calciférol donné en solution huileuse.

Tels sont les faits fondamentaux relatifs au rôle que l'alimentation joue dans le développement de la carie dentaire. Ces faits sont nombreux, peut-être trop nombreux. On préférerait qu'il y en ait moins et que l'un d'eux soit déterminant. Certains prêtent à discussion. Si nous voulions les rassembler dans un raccourci qui mette en valeur les faits utiles pour l'établissement de la prophylaxie et la thérapeutique de la carie ainsi que pour la recherche de ses causes, nous présenterions les conclusions suivantes:

1°. L'alimentation n'est pas le facteur déterminant de la carie, c'est un facteur prédisposant.

2°. L'alimentation est un facteur parmi d'autres, mais son mode d'intervention présente cette particularité de s'effectuer par des voies et moyens très divers. Son influence s'exerce par la voie interne durant la période de formation et de maturation de la dent. Elle s'exerce par la voie externe, uniquement sur la dent qui a fait son éruption. A ce moment, son action est indirecte par le moyen de la salive.

3°. Ces modalités d'action conduisent à des mesures prophylactiques et curatives très variées, qui vont de la surveillance de l'alimentation de la mère et de l'enfant à l'application locale de fluorures ou de vitamine K.

Cette revue, limitée au rôle de l'alimentation, met en relief l'importance de diverses connexions pathogéniques dans le déterminisme de la carie, et incite à en préconiser une étude encore plus approfondie que celle qui a été poursuivie jusqu'ici. Et voici deux directions de recherches dont la nature ne surprendra pas ceux qui ont bien voulu m'écouter.

1°. *La bactériologie de la carie*: non seulement en ce qui concerne les acidogènes mais aussi les protéolytiques et notamment des anaérobies; il faudrait rechercher si des adaptations de certaines races microbiennes ne peuvent pas faire d'elles des agents quasi-spécifiques

2°. L'étude approfondie de la structure physique normale et pathologique de l'émail et de la dentine en vue d'une meilleure compréhension de la pénétration des germes, des enzymes, des substrats dans la structure dentaire qui seront le siège de la carie.

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La pâte à faire repousser les dents

Plus de rages de dents, plus d'extractions, plus de plombages, plus de dentiers ! Un savant canadien (!) vient de ruiner d'un seul coup la corporation des chirurgiens-dentistes et celles des fabricants d'appareils de prothèse.

Ce bienfaiteur de l'humanité (moins les catégories sus-nommées) a inventé une pâte qui, placée dans la cavité d'une dent malade, stoppe net la douleur et permet à la dent de se cicatriser par elle-même, de repousser en quelque sorte, sans y laisser de traces.

Cette découverte remplit de joie le ministère de la Santé publique qui, depuis qu'en Angleterre la médecine est nationalisée, n'en finissait plus de payer les dentiers aux sujets de Sa Majesté.

Médecine et Hygiène, 15 novembre 1949.

Dans le monde dentaire

Activités du Collège des Chirurgiens-Dentistes de la province de Québec

Au cours de ses récentes assemblées, le Bureau provincial de Chirurgie dentaire apporte certaines modifications aux Règlements du Collège des Chirurgiens Dentistes de la Province de Québec. Désirant intensifier sa campagne de répression de la pratique illégale et porter, à \$15.00 par membre en règle, sa contribution annuelle à l'Association Dentaire Canadienne, afin de lui permettre d'accomplir plus efficacement sa mission, le Bureau décide, à son assemblé du 16 décembre 1949, de porter la contribution annuelle des membres du Collège à \$35.00 et à l'unanimité adopte en conséquence les règlements suivants:

"Tout membre du Collège des Chirurgiens-Dentistes de la Province de Québec est tenu, conformément à l'article 91 de la Loi des Dentistes de Québec, à compter du 1er juillet 1950, de verser entre les mains du Registraire la somme le trente-cinq dollars' (\$35.00) comme contribution annuelle; cette contribution est payable et exigible d'avance le 1er juillet de chaque année.

A compter du 1er janvier 1951, le Collège versera annuellement à l'Association Dentaire Canadienne une contribution de quinze dollars (\$15.00), par membre en règle avec le Collège."

Les membres du Collège sont priés de noter qu'à compter du 1er juillet 1950, cette contribution est payable d'avance.

A son assemblée du 18 février 1950, le Bureau à l'unanimité adopte la résolution suivante:

"QUE le Comité de Législation soit autorisé à faire toutes dépenses et démarches, remplir toutes formalités et retenir les services d'avocats de son choix pour faire présenter à la Législature de la Province de Québec un bill tendant à amender la loi actuelle des chirurgiens - dentistes et notamment les articles 41, 85, 130, 132, 134, 135 et 148."

Le Comité de Législation élabore en conséquence un projet d'amendements devant être présenté au cours de la présente session de la Législature provinciale.

A cette même assemblée, prenant en considération la recommandation du Conseil Exécutif, le Bureau décide, par un vote

majoritaire, de louer à 3607, rue St-Denis, Montréal, un local qui sera occupé par le Collège, à compter du 1er mai 1950, pour y loger les bureaux du Registraire.

Le Bureau, à cette même assemblée, donne instructions au Registraire de citer certains membres du Collège devant le Conseil de Discipline; selon le rapport de l'investigateur, quelques-uns d'entre eux auraient confié l'exécution de certains travaux de prothèse dentaire à des techniciens dentaires, sans que ces travaux soient accompagnés de l'ordonnance requise par la Loi des Dentistes de Québec; un autre aurait exercé l'art dentaire sans s'identifier en affichant ouvertement son nom et sa profession; enfin un autre aurait à son emploi un autre dentiste et n'en aurait pas avisé le Registraire, tel que requis par les Règlements du Collège des Chirurgiens-Dentistes de la Province de Québec.

Les confrères liront sans doute avec intérêt le jugement suivant rendu par le juge T. A. Fontaine:

DR DENIS FOREST

plaignant

vs

DAVID N. WIENER

prévenu

"La dénonciation ou plainte qui a été portée contre le prévenu en cette cause, le 23 décembre 1949, par le Dr Denis Forest, chirurgien-dentiste des cité et district de Montréal et registraire du Collège des Chirurgiens-Dentistes de la province de Québec, reproche à l'accusé d'avoir, le 20 décembre 1949, alors qu'il n'était ni médecin, ni chirurgien licencié et qu'il n'était pas inscrit comme membre du Collège des Chirurgiens-Dentistes, pratiqué, illégalement comme dentiste, cette pratique ayant consisté en ce que, au lieu et au temps susdits, ledit David N. Wiener a fabriqué des pièces de prothèse sans ordonnance, moyennant rémunération et ce, contrairement à la Loi des dentistes de Québec, chapitre 268 des Statuts Refondus de la province de Québec 1921, et amendements.

Il convient, en tout premier lieu, d'examiner quels sont les amendements apportés à la Loi concernant le Collège des Chirurgiens-Dentistes de la province de Québec, en 1944, en 1946 et, enfin, en 1948.

La Loi des dentistes de Québec a été amendée à plusieurs reprises et nous ne

croyons pas qu'il soit nécessaire de rapporter ici l'historique de ces amendements. Il nous suffira, pour les fins de la présente cause et de la décision qui doit intervenir, de souligner que par le Statut 12 Geo. VI, chapitre 33, loi modifiant la Loi des dentistes de Québec et sanctionnée le 22 mars 1948, l'article 134 de ladite Loi, définissant les divers cas d'infractions concernant la pratique illégale de la profession de dentiste ou de chirurgien-dentiste en cette province, a été amendée modifiant comme suit le paragraphe 9 de cet article qui se lit maintenant comme suit, savoir:

"Quiconque, sauf les médecins et chirurgiens licenciés, n'étant pas porteur d'une licence de chirurgien-dentiste légalement accordée par le Bureau et n'étant pas inscrit comme membre du Collège:

1o- pratique dans la province comme dentiste ou comme chirurgien-dentiste;

9o- fabrique ou répare des pièces de prothèse dentaire ou tout autre appareil de restauration dentaire ou buccale sans une ordonnance expresse signée par un médecin ou dentiste licencié et contenant:

- a) un numéro d'ordre;
- b) la date de l'ordonnance;
- c) le nom du laboratoire;
- d) la description détaillée du travail à exécuter;
- e) l'indication du matériel à utiliser;
- f) la signature du médecin ou du dentiste."

Au cours du procès qui a eu lieu en cette cause le 9 février dernier, la poursuite a fait entendre les deux témoins suivants, savoir: *Gérald Robert* et *Ernest Leclair*.

Au terme du témoignage rendu par le premier témoin de la poursuite, l'enquêteur *Gérald Robert*, il appert que le 20 décembre ces deux enquêteurs du Collège des Chirurgiens-Dentistes, dûment autorisés à cet effet, se sont présentés, vers les 3.30 hres de l'après-midi, au laboratoire de techniciens-dentistes dont l'accusée est copropriétaire, savoir: *S. & W. Laboratory*.

Il est en preuve que les deux enquêteurs du Collège des Chirurgiens-Dentistes ont là et alors exhibé aux deux co-propriétaires de ce laboratoire, à savoir l'accusé *David N. Wiener* et un nommé *Steinberg*, la pièce produite comme P-1, à savoir une autorisation donnée par le Collège des Chirurgiens-Dentistes de la province de Québec à

l'enquêteur *Gérald Robert*, pour exiger de tous techniciens dentaires et de l'accusé en particulier l'ordonnance prévue ou les ordonnances prévues par la Loi des dentistes de Québec.

Lors de cette visite chez l'accusé, les inspecteurs ont constaté que ce dernier était occupé à des travaux de prothèse dentaire et ils ont remarqué la présence de cinq (5) pièces de prothèse dentaire, savoir: un dentier du bas, un dentier du haut, un dentier complet, etc. D'autres pièces de prothèse dentaire se trouvaient, en état de fabrication, dans le laboratoire de l'accusé.

Après avoir examiné les dites pièces, l'inspecteur *Robert*, qui est à l'emploi du Collège des Chirurgiens-Dentistes en cette qualité d'inspecteur, depuis 15 ans, a demandé à l'accusé et à son compagnon *Steinberg* qui se trouvait là, de bien vouloir exhiber et produire les ordonnances spéciales concernant ces pièces particulières de prothèse dentaire en état de fabrication.

Il n'est pas nécessaire de réciter ou de reproduire ici au long la conversation qui a eu lieu au cours de cette entrevue, mais la preuve établit que l'accusé a répondu à l'inspecteur qu'il n'avait pas d'ordonnance et ne pouvait pas en produire tout en mentionnant les noms des dentistes pour qui ces pièces de prothèse dentaire auraient été ainsi fabriquées.

Ce témoignage de l'enquêteur *Gérald Robert* est corroboré en tous points par celui qui l'accompagnait en cette circonstance, à savoir le témoin *Ernest Leclair*. Ce dernier ajoute cependant une déclaration qu'il est peut-être bon de mentionner ici. En effet, le témoin *Leclair* ajoute que, au cours de la conversation, l'accusé aurait déclaré "qu'il ne pouvait pas refuser de l'ouvrage quand les dentistes ne donnaient pas d'ordonnance". Il s'agit là, évidemment, est-il besoin de le souligner, d'une interprétation absolument fausse et absolument erronée des dispositions de la Loi bien explicite et bien formelle s'appliquant à la matière, avec les dispositions bien claires et bien précises des derniers amendements apportés à cette Loi.

Il est vrai que, au cours du procès, l'accusé a exhibé et produit une liasse de prétendues ordonnances ou commandes qui, pour la plus part, sont incomplètes pour ce qui concerne l'une ou l'autre des dispositions du paragraphe 9 de l'article 134.

Au surplus, la défense elle-même, par son premier témoin M. Paul Phénix, secrétaire de "l'Association des Techniciens-Dentaires", a admis qu'en vertu des dispositions actuelles de la Loi aucun technicien-dentiste ne peut exécuter des travaux de prothèse dentaire sans être muni, au préalable, d'une ordonnance contenant en détail, toutes et chacune des conditions requises à l'article ci-dessus mentionné.

Toute cette preuve et toute cette cause peuvent se résumer dans les quelques observations suivantes, à savoir que, à la date en question, l'enquêteur dûment autorisé, du Collège des Chirurgiens-Dentistes s'est présenté chez l'accusé alors que ce dernier était occupé à des travaux de prothèse dentaire, que là et alors ledit enquêteur a demandé à l'accusé de lui exhiber ou de lui produire les ordonnances requises pour l'exécution de ces travaux et, enfin, que l'accusé n'a pu produire

d'ordonnances à cet effet en déclarant là et alors qu'il n'en avait pas.

Il est donc clair, dans ces circonstances et pour toutes ces raisons, que l'accusé ne s'est pas conformé aux dispositions bien claires et bien formelles de l'article 134, paragraphe 9 de la Loi des chirurgiens-dentistes telle que modifiée par l'article 13-B, 12 Geo. VI, chapitre 33.

En conséquence et pour toutes ces raisons le tribunal doit en venir à la conclusion que l'accusé s'est rendu coupable de l'offense qui lui est reprochée. L'accusé est donc déclaré coupable et condamné au paiement d'une amende de \$50.00 et au paiement des frais et, à défaut du paiement de l'amende et des frais, à trois mois de prison tel que prévu par l'article 134 de la Loi susdite telle que modifiée par l'article 8, 10 Geo. VI, chapitre 46."

Montréal, le 24 février 1950.

Journées dentaires de Montréal

Endroit: Hôtel Windsor, Montréal.

Conférences: "Méthodes de contrôle de la carie dentaire", par le docteur Jean-Paul Lussier, de l'Université de Montréal.
"L'anesthésie générale au service de la dentisterie", par le docteur Léo Ratelle, Roberval.

Séances Générales

- Cliniques répétées:**
- 1) "Préparation et confection de coiffes (or et acrylique, porcelaine et plastique)", par le docteur Guy Lefrançois, Montréal.
 - 2) "Reconstitution des dents antérieures en acrylique pour prothèse immédiate", par le docteur Aimé Couture, Ottawa.
 - 3) "Médication en dentisterie", par le docteur A. C. Voisard, Montréal.
 - 4) "Couronnes et ponts", par le docteur Médéric Robichaud, de l'Université de Montréal.
 - 5) "L'emploi des substances colloïdales en couronnes et ponts", par le docteur Jacques Demers, Montréal.
 - 6) "Prothèse complète", par le docteur F. Landa, New York.

Films, cliniques de tables, forum

Clinique continue: "Anesthésie et chirurgie buccales", par les docteurs Gérard de Montigny et Antoine Raymond, de l'Université de Montréal.

(Clinique sur patients, offerte, chaque jour, à un groupe de congressistes)

Événements sociaux: -Déjeuners avec conférenciers (les 1er et 2 juin)
-Souper en l'honneur du docteur Ernest Charron, doyen de la faculté de Chirurgie Dentaire de l'U. de M. (le 1er juin)
-Buffet-cocktail, danse (le 2 juin)
-Programme d'activités pour les dames.

Renseignements: Mm. les docteurs Louis Lépine, 1538 ouest Sherbrooke
Roger Charette, 4869 Garnier
Montréal.

TWO GOLDEN DAYS

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THERE are two golden days in the week upon which and about which I never worry — two carefree days, kept sacredly from fear and apprehension.

One of these days is Yesterday. Yesterday, with its cares and frets; and all its pains and aches; all its faults, its mistakes and blunders, has passed forever beyond my recall. I cannot undo an act that I wrought, I cannot unsay a word that I said. All that it holds of my life, of wrong, regret, and sorrow, is in the hands of the Mighty Love that can bring honey out of the rock, and sweetest waters out of bitterest desert. The Love that can turn weeping into laughter; that can give beauty for ashes; the garment of praise for the spirit of heaviness; joy of the morning for the woe of the night.

Save for the beautiful memories, sweet and tender, that linger like the perfume of roses in the heart of the day that is gone, I have nothing to do with Yesterday. It was mine—It is God's!

And the other day that I do not worry about is Tomorrow. Tomorrow, with all its possible adversities, its burdens, its perils, its large promise and poor performance, its failures and mistakes, is as far beyond my mastery as its dead sister, Yesterday. It is a day of God's. Its sun will rise in roseate splendor, or behind a mask of weeping clouds—but it will rise.

Until then, the same love and patience that held Yesterday holds Tomorrow. Save for the Star of Hope that gleams forever on the brow of Tomorrow, shining with tender promise into the heart of Today, I have no possession in that unborn day of grace. All else is in the safe-keeping of the Infinite Love that is higher than the stars, wider than the skies, deeper than the seas. Tomorrow is God's day. It will be mine.

There is left for myself, then, but One Day in the week—Today! Any man can fight the battles of Today. Any woman can carry the burdens of just One Day. Any man can resist the temptations of Today. O, friends, it is only when we wilfully add the burden of those two awful eternities—Yesterday and Tomorrow—such burdens as only the Mighty God can sustain—that we break down. It isn't the experience of Today that drives men mad. It is the remorse of something that happened Yesterday, and dread of what Tomorrow will disclose.

These are God's Days. Leave them with Him!

Therefore, I think and I do, and I journey but one day at a time. That is the easy way. That is Man's Day. Dutifully I run my course and work my appointed task on that Day of ours. God, the All-Mighty and the All-Loving takes care of Yesterday and Tomorrow.

—Robert F. Burdette



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The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, JUNE, 1950

No. 6

PREVENTIVE PRINCIPLES IN GENERAL PRACTICE*

by J. A. SALZMANN, D.D.S., NEW YORK, N.Y.

PREVENTIVE measures to be effective, must be applied early in the dental development of the child. It is essential, therefore, for the general practitioner of dentistry to possess basic knowledge of the preventive principles involved in children's dentistry.

Prevention of malocclusion is a basic factor in children's dentistry. It has not obtained the wide interest of the general practitioner because dentists have not been sufficiently sensitized to the value of the orthodontic approach to their patients. Discussion between the orthodontist and the general dentist in the past has consisted too frequently in the orthodontist showing off some "before" and "after" casts.

It is important for the dental practitioner to recognize the orthodontic entailments in every phase of his practice, even if he never intends to practice any form of orthodontics which requires the insertion of appliances in the mouth of a child. Orthodontic principles apply in filling of teeth, restoration of lost teeth or the treatment of the soft tissues of the mouth. Failure to do so is largely responsible for the frequent misunderstandings between orthodontists and general practitioners with regard to the dental care of the orthodontic patient.

Many dentists have been known to examine the mouth without once ask-

ing the child patient to bring his teeth into occlusion or to move the mandible through its various excursive paths to determine traumatic interferences. Today the advice frequently given parents by the family dentist, often without examining the mouth of the child and occasionally in reply to a telephone call, is that it is "too early" for their young child to receive orthodontic care. This advice is only too frequently followed sometime later by the observation that it is already "too late" to prevent and frequently also to treat, the malocclusion which has now fully established itself.

Erupting teeth may appear to be—and frequently are—in a transitory state of malocclusion. Children undergoing these stages of development, we have been told, should be kept under observation over a period of time until these teeth are fully erupted and the occlusal adjustments accompanying eruption are effected, before a diagnosis of malocclusion is established. However, if the observation of the general practitioner is to be worth anything to the patient, he must understand the principles of growth and development of the dental-arches.

DIAGNOSTIC FACTORS

In the examination of the patient, we have available various diagnostic aids.

*Presented before the Twenty-Fifth Annual Fall Clinic of the Montreal Dental Club, Montreal, Que. October 19, 1949.

To forego the advantages of any of these aids, *e.g.*, roentgenograms, casts, photographs, direct facial measurements, general dental and medical history and other items which enter into the appraisal of the dental status of the child patient, is to handicap ourselves in establishing a correct diagnosis.

There is one important diagnostic factor available to us which is often overlooked when examining the child. I refer to the factor of time, which constitutes a fourth dimension in orthodontic diagnosis. A knowledge of the development of the dentofacial complex in the three dimensions of space through the interval of time is the keystone of orthodontics and also of children's dentistry. However, in order to gauge these changes, through time and space in the dental development of the child, we must have available definite knowledge as a base which can be used for comparative purposes. Furthermore, we must know how to employ this knowledge, not merely in relation to "standards," but in its application to the individual child who sits in our dental chair.

Maintenance of the deciduous dentition in a healthy state until these teeth are shed is a primary influence in the prevention of malocclusion. Timely, filling of deciduous teeth is important not only for the prevention and elimination of oral infection but also for alveolar growth and for proper establishment of the dental arch and as an aid to normal occlusion of the permanent teeth. Malocclusion can be initiated by the child when he favors one side of his jaw to avoid chewing on carious teeth or to obtain tooth contact when some of the teeth have been extracted.

Early recognition of ectopic eruptive tendencies of teeth, the presence of supernumerary and malposed teeth and congenitally missing teeth are important factors in the prevention of malocclusion. Timely extraction of a supernumerary or of a deciduous tooth past the physiologic age when it should

be shed is sufficient to intercept malocclusion.

Lingually occluding maxillary incisors or, conversely, labially occluding mandibular incisors should be diagnosed from the standpoint of sufficient space and arch deviation. Self-treatment advice to the patient by the use of tongue blades is at best haphazard and may upset further the general occlusion of the teeth.

A locked erupting permanent first molar requires extraction of the deciduous second molar, and space opening or maintenance for the accommodation of the oncoming second premolar. In cases where the locking is light, disking of the distal bulge of the deciduous second molar or unlocking of the permanent first molar by means of ligatures or spring traction is indicated. In all of these cases, the general development of the dental arches, the arrangement of the teeth and their effect on facial appearance are to be taken into consideration before the method of treatment is decided.

CROSSBITES

Crossbites should receive early treatment, as soon as diagnosed. If the occlusion is in crossbite relation, a lateral deviation of the mandible may be established. However, the method of treatment, *i.e.*, the appliance to be used, presents an important decision. In the deciduous dentition between ages 3 and 5, fixed appliances may be used. In the mixed dentition removable appliances which do not interfere with the natural eruptive process of the permanent incisors and other teeth are indicated. In posterior crossbites, in the mixed dentition, cross elastics will not prove efficient because, while normal tooth alignment may be achieved in this manner by moving and aligning the deciduous teeth to which the cross elastics are attached, the bodily position of the mandible may be allowed to remain in lateral deviation. Furthermore, the deciduous teeth may be loosened and exfoliated. Supernumerary central teeth may be responsible

for delayed eruption, non-eruption and spacing of the permanent teeth. Early removal of supernumerary teeth is important to prevent crowding and other dental irregularities and dental arch malrelationships. Where a supernumerary tooth of the duplicate type is found in the permanent dentition with the teeth in regular alignment, there is no valid reason for its extraction, provided the occlusion is not greatly interfered with or where removal would involve major orthodontic tooth movement.

SPACE MAINTAINERS

In determining the need for space maintenance, the dental arches, the growth of the jaws and their relation to aesthetics must be given due consideration. Space maintenance thus becomes intimately related to orthodontic principles in general.

A sizable percentage of malocclusions is attributable also to prolonged retention of deciduous teeth. While it is generally recognized that the presence or absence of the deciduous teeth is not a factor in jaw growth, it is an accepted fact that premature loss of deciduous teeth is a factor in malocclusion of the permanent dentition. The deciduous teeth reserve the vertical and horizontal space for the permanent teeth, since they help to maintain the line of occlusion and the mesiodistal arrangement of the teeth in the arch. The deciduous teeth prevent the exclusion from the line of occlusion of permanent succeeding teeth, especially premolars and canines.

There are two schools of thought with regard to procedure after premature loss of deciduous teeth: (a) Those who immediately place a space maintainer and (b) those who believe that space maintainers are altogether unnecessary and that malocclusion following premature loss of deciduous teeth occurs only in those children who *a priori* show a lack of jaw growth and who would under any circumstances show malocclusion when the permanent dentition is erupted.

Those who favour the use of space maintainers should recognize that a space maintainer is a passive, and frequently an active, orthodontic appliance. As such, a space maintainer when placed in the mouth of a child should receive inspection and adjustment at frequent intervals and removed from the mouth when no longer needed, to avoid interferences with the erupting permanent tooth. A space maintainer which interferes with the adjustment of the occlusion of the teeth which normally takes place with the eruption of the premolars and permanent canines is productive of malocclusion.

Among the conditions in which space maintainers should not be placed are the following:

1. When there is no bone overlying the crown of the erupting permanent tooth and the development of the oncoming permanent tooth shows about one-third of its root already calcified.
2. When the space left by the prematurely lost deciduous tooth is definitely in excess of the mesiodistal dimension of the permanent successor as shown by actual measurement of the roentgenogram and where the space shows no sign of closing beyond that point.
3. When opening or retention of the space is contra-indicated because of a generalized lack of growth of the jaws and where such space maintenance would further complicate existing malocclusion.
4. Where the permanent, succeeding tooth is absent and where space maintenance is not indicated to preserve general occlusion and arch relationship.

Space maintenance during the mixed dentition period which is recognized as the most critical stage in the dental development of the child, if not properly applied, can interfere with the proper time-scale of adjustment when the deciduous teeth are shed, thus affecting the eruption, arrangement, and occlusion of the teeth in the permanent dentition. Knowledge of the develop-

ment of normal occlusion, the time sequence in the development of the child's dentition and ability to recognize the rate and direction of the general physical maturation of the child in relation to the development of the dental growth pattern are the primary requirements of preventive orthodontics. The foregoing applies with especial force to the placement of space maintainers.

SUCKING HABITS

The effect of posture during the waking hours of the child is more important than position during sleep in the production of dental malocclusion.

As to the effect of sucking habits on the maxillary and mandibular bones and the dental arches including the occlusion of the teeth, the frequency with which the habit is practised, the duration of time that the habit has lasted, the osteogenic development and genetic endowment of the child, the general state of health and other factors are important contributory causes in determining the presence, type and severity of the resulting malocclusion.

It is logical to assume that where local conditions favour changes in the supporting bones of the teeth, the pressure caused by the thumb, fingers, tongue or lip will produce changes of a malocclusal nature. When the maxillary incisors are displaced in a forward direction, the alveolar process also becomes displaced and enlarged. If the lower lip falls lingual to the maxillary incisor teeth, it continues their forward displacement. Furthermore, continued pressure of the hand against the chin during the finger sucking process may well produce a change in the overall direction of growth of the mandible or displace it bodily in a distal direction. It is harmful to dismiss sucking habits as having no bearing in the production of malocclusion.

Perhaps the most dangerous effect of finger and thumb sucking is the parental nagging which sets up conflicts between the child and the parents. Such parent-child relationship in-

terferes with the motor development of the child and develops a negativistic attitude in the child. A personal appeal to the child, preferably by someone other than the parent, to obtain the child's cooperation in eliminating the habit is important. The child is thus given a sense of responsibility in the habit breaking process.

Before nasal breathing can be encouraged in mouth breathers, it must be ascertained that it is possible for the child to breathe through the nose. Nasal breathing should be practised after strenuous exercise. Purposive mouth breathing, finger sucking or lip biting in front of a mirror at specified intervals may be advised as a means for bringing these to the consciousness of the child.

With the cooperation and consent of the child an appliance may be inserted in the maxillary jaw which interferes with the insertion of the thumb, finger or lip in its accustomed place.

ORAL SCREEN

The use of an oral screen worn at night has been advocated for overcoming pressure habits. The screen can be made of plastic or metal. It is fitted to the oral vestibule between the teeth and gums. To construct the screen, impressions are taken of the upper and lower dental arches, making certain that all of the vestibular surface up to the mucco-buccal fold is included. Casts are poured and related as near to normal occlusion anteroposteriorly as possible by bringing forward the mandibular cast. The screen is constructed of two thicknesses of wax, extending from the maxillary to the mandibular buccal fold, skirting the muscular frenii and going as far distally as the distal cusp of the permanent first molars. The waxed screen is then pulled slightly away from the buccal dental segments and made to rest on the protruding anterior teeth. If the screen is to be used also for lip exercises, a wire ring is inserted on the labial surface at the level of the lower border of the upper lip.

Re-establishment of normal muscle

tone of the lips usually follows orbicularis oris exercise by means of the screen. Insertion of the screen in the mouth should be done by the child himself.

The correction or interception of malocclusal tendencies at any early age may not prevent the occurrence of malocclusion from other causes at a later age. Early treatment should be instituted for the purpose of obtaining the maximum benefit of function in order to achieve the genetic growth and development potentialities of the child. More than one period of orthodontic treatment may actually be necessary because new interferences and imbalances in arch and/or jaw relationship may manifest themselves in later childhood.

EXTRACTION AS A PREVENTIVE OF MALOCCLUSION

Extraction of teeth as a prophylactic therapeutic measure is fraught with danger. Extraction, when resorted to as a sole method, when it is desired to overcome crowding in the dental arch is dangerous unless the post-extraction shifting is directed by orthodontic means. It is misleading to speak about indications for extractions in terms of desirable shifting of teeth which does not necessarily follow extraction without the aid of orthodontic therapy.

Shifting, inclination and rotation of the teeth follow extraction of permanent first molars. In the maxilla, the extraction space is closed as a rule mostly by the forward shifting of the permanent second molars, while in the mandible the premolars and permanent second molars show a reciprocal amount of shifting. Extraction of permanent first molars in the maxillary arch is followed by migration of the anterior teeth with an increase of spacing and a decrease of crowding. In the mandibular arch, extraction of permanent first molars is followed by lingual shifting of the anterior dental segment. However, the rate and direction of tooth shifting after extraction

is subject to many influences so that the results are unpredictable and usually prove highly undesirable.

Perhaps the most dangerous approach to children's dentistry is the mistaken notion that extraction is a "cure" for crowded teeth. Extraction is to be practised only when the basal arches are deficient and normal tooth arrangement cannot be obtained without bringing the moved teeth into conflict with the intrinsic forces of the jaw bones.

From the orthodontic standpoint, the patient with a deciduous or mixed dentition, or even the one with a young, permanent dentition, presents a dentition in a dynamic state. Changes follow quickly, one upon the other. These changes may be of a favourable or unfavourable nature, whereas the sequence of change in the adult dentition, barring those affected by orthodontic procedure or by dental care, are practically always of a retrogressive nature.

Appliances inserted in the mouth at certain periods can be extremely harmful to the developmental tooth adjustments necessary for the establishment of normal occlusion. An example can be found when the permanent anterior teeth are completing their eruption and the maxillary central incisors are moving together while the maxillary lateral incisors are undergoing their final stages of eruption.

Another example is to be found in the insertion of appliances which bind the anterior and lateral segments of the dental arch and prevent the development of space at the deciduous canine to accommodate the wider permanent canines. Still a third method of interference with the eruptive adjustment of the dentition is in the use of appliances which prevent the permanent first molars from achieving their forward adjustment subsequent to the loss of the deciduous molars and the beginning of the eruption of the premolars. Interference with the forward adjustment of the permanent first molars at this time

may result in loss of proximal contact in the region of the premolars. Such loss of contact is usually followed by rotation and inclination of the premolars with disturbance of the entire occlusion. Thus, a new malocclusion of a generalized type may be initiated while attempting to correct a local malocclusion involving one or two teeth in a part of the arch.

Orthodontic therapy whether or not involving the use of mechanical appliances, should be undertaken as soon as it is recognized that a condition exists which interferes with normal growth, development or function or relationship of the teeth and dental arches exist and where there is little or no possibility of correction by further growth or developmental processes alone.

PREGNANCY TUMOUR: REPORT OF CASE

by W. AUBREY CRICH, D.D.S., Grimsby Beach, Ontario.

PREGNANCY tumour is a tumour mass made up of hypertrophied gingival tissue. These tumours develop about the second or third month of pregnancy and are usually of a deep red or purplish colour and resemble a giant cell epulis. One frequently sees a gingivitis of pregnancy but in my experience tumours are not commonly found. Pregnancy tumours are usually pedunculated and gradually increase in size. Thoma¹ reports that these tumours may occur in multiple form and involve several areas. Some men believe that these tumours may recur in the same area or in different areas with each subsequent pregnancy. Some also think that if the tumour is removed before parturition it will recur, but if left will recede spontaneously after delivery. Thoma¹ reports a case which recurred after incomplete excision but he does not believe they disappear spontaneously. Pregnancy tumours are removed by excision preferably by means of an electric-knife.

REPORT OF CASE

History. The patient was 26 years of age and was seen on June 27, 1949. She was in her fourth month of pregnancy and stated that shortly after becoming pregnant a small tumour developed immediately behind the upper central incisors and had continued to increase in size. It was now interfering with eating and speaking.

Examination. The patient was a well nourished individual whose physical examination gave essentially negative results. Clinical examination revealed a spherical, greyish-purplish tumour about 2 cms. in width attached to the gingival tissue by a broad pedicle (Fig. I). The lower incisor teeth were biting up into the base of it.

Operation. Under local anaesthesia the tumour was excised through the pedicle with a scalpel (Fig. II). Bleeding was readily controlled by pressure. Healing was uneventful. (Fig. III).

Pathological examination of a section of the tumour was haemangioma of the gingiva with ulceration.

Comment. This was the patient's first pregnancy and she had no recur-

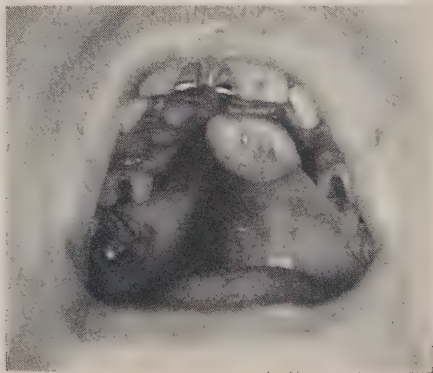


FIG. 1
Pregnancy Tumour

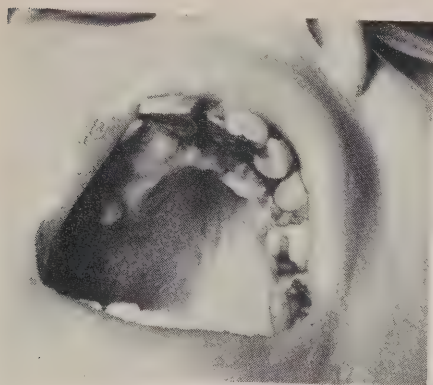


FIG. 2
Condition after excision of Tumour

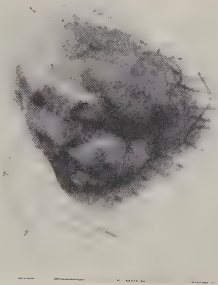


FIG. 3
Tumour after Removal

rence of this tumour. It will be interesting to follow her case and learn if another tumour develops should she become pregnant again. These tumours when excised usually bleed rather profusely, hence electro-surgery is favoured. The bleeding however can usually be controlled by pressure. Silver nitrate may be used to stop the haemor-

rhage if you do not have an electro-coagulating machine.

The aetiological cause of pregnancy tumours is not fully understood but it is thought to be due to some endocrine disturbance associated with pregnancy.

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A Mathematical Method of Determining the Length of a Tooth for Root Canal Treatment and Filling

by Dr. RALPH C. BREGMAN, Toronto, Ontario

X-RAYS and diagnostic wires are essential to any method for measuring the length of a root canal, and the knowledge of that length must be known in the treatment and filling of a root canal.

At the present time there are two methods of determining the measurement, both of which have their disadvantages. In one method a diagnostic wire is inserted into the canal until the patient winces. This does give the length but indicates that the instrument has passed through the apical opening of the canal. This should not be done because it causes a traumatic injury to periapical tissues and will interfere with healing. The other

method is a trial and error technique. The diagnostic wire is inserted an arbitrary distance into the canal attempting to avoid injuring the periapical tissues. Then the result is x-rayed. If the wire is short, it is moved up some distance, and x-rayed again. These trials and errors are continued until the exact length of the canal is known. This is time consuming and difficult because of the elongation of the image of the tooth in the radiogram.

With the following technique and mathematical formula, periapical injury is avoided, time is saved, and advantage is taken of the elongation in the x-ray film.

A root canal file with stop is inserted a short measured distance into the root canal. At the present time we are using a distance of 10 mm. for ease in multiplication. The stop for the wire that we use in this office, is made in the following manner. A piece of stainless steel matrix strip .002 thick is cut about 5 mm. square. The point of a thumb tack is pushed through the metal. This hole is made as small as possible. It is then threaded on to a root canal file a distance of 10 mm. Because of the threads on the file it cannot slip up or down the file once it is set in position. When this is in place in the canal an x-ray is taken, and the angle adjusted on the tube so that the tooth is deliberately elongated. When the x-ray is developed, measure the length of the elongated diagnostic file, and then the length of the elongated tooth in the film.

We now have three measurements, the real distance the file penetrated the tooth, the apparent length of the file in the film, and the apparent length of the tooth. Using these measurements in the following formula we can obtain the real length of the tooth.

$$\frac{\text{Real length of the wire}}{\text{apparent length of the wire}} \times$$

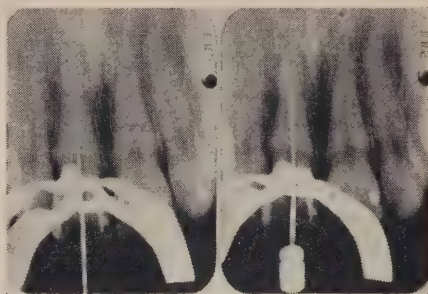


FIG. 1

FIG. 2

apparent length of the tooth
equals the real length of the tooth.

The stop on all instruments that go into the tooth canal can be set at that figure with complete confidence that there will be no penetration into the periapical tissues.

For example in figure 1 the real length of the file was 16 mm. In the film the elongated length of the file was 20 mm., and the length of the tooth was 30. mm. Using the formula

we have $\frac{16}{20} \times 30 = 24$ mm. For demonstration purposes that length was inserted, and a new x-ray was taken See figure 2.

Something New Has Been Added

It was the writer's privilege, a short time ago, to witness what many people believe to be the most revolutionary change in dental procedures since Taggart invented the gold inlay. It was a demonstration, by means of a motion picture and slides, of the Airdent. Whether or not this new "airbrasive" will do away with the rotary instruments now in use is doubtful because, as one of the lecturers pointed out, a dentist must be an artist to use it successfully and must, in order to prepare a cavity, visualize its form exactly as it is to be when completed. Not everyone will be able to do that.

The advantages of the airbrasive technique, as it looks from here, are: elimination of pressure (it uses only a force of one-half ounce); doing away with the generation of heat, which is inherent in rotary instruments; and, getting away from vibration and noise. In fact it should eliminate fear from dental operations, and that would be something. One need not get too excited about the machine, as yet, it probably won't be ready for marketing until next year, but its implications stagger the imagination.—*Editorial in F. Review of Chi. D. Soc. May 1, 1950.*

Must We Consider the RUBBER DAM as Old Fashioned, Useless and . . . Inhuman?

by J. ARTHUR RENAUD, D.D.S., Montreal, Que.

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IN 1855, Dr. Robert Arthur, one of the first two graduates of the Baltimore College of Dentistry, in Maryland, U.S.A., announced that he had found a new way of using cohesive gold as a filling.¹ Nine years later, in 1864, Dr. S. C. Barnum, practising dentistry in the city of Monticello, N.Y., conceived the idea of using the Rubber Dam in operative dentistry, thus facilitating the use of gold foil.² This man has contributed greatly indeed to the art of dentistry and no doubt could have become rich. Unfortunately, this new conception of dryness, together with his generosity, were neither appreciated nor recognized until fifty years later. It is therefore thanks to him if Gold Foil in America for many years reigned supreme, among all restorations.

After considering the importance given to the Rubber Dam by all authors of Operative Dentistry, to deny its usefulness is to admit one's shortcomings as an operator, or to be prejudiced. G. V. Black alone devoted forty pages on the subject.³ I would say that this remarkable man certainly never quibbled about anything of which he knew nothing. Practising a profession he loved and moreover being a professor, he possessed a vast experience. It is easy to understand the importance he gives to the Rubber Dam upon reading his chapter entitled: "Keeping the Operating Field Dry". Proof of this lies in the fact that this procedure is given first place and recommended as being the surest method of obtaining a perfectly dry operating field. His followers all agreed on this point.⁴ No one has ever given it second place so how may we explain its lack of popularity? When we think of all the advantages derived by the

patient himself, and also by the operator who makes use of it—why, then, should we turn to inferior methods? G. V. Black, whom I consider the best authority on this subject, because he covered practically all kinds of cases, long ago established that only by using the Rubber Dam can one operate successfully for hours at a time in a dry field. This knowledge alone should induce us to put his method into practice, at least for one who is conscientious and quality-minded. Other advantages, equally important, may be added, such as protection of connecting tissues (cheek, tongue,) unobstructed view, larger operating field, easier maintenance of cleanliness, fingers kept free of saliva, faster operation, less pain, and more durable fillings. Are not all these reasons enough to prove that the Rubber Dam is beyond doubt the most useful accessory existing today?

Do you not believe that if your patients were aware of this information, they themselves would be the first to insist upon its use, thus forcing all prejudice against it to disappear? It is best not to wait for the day when the public will demand this method of operating and when you will be judged accordingly.

I wonder if those of you who occasionally seek dental treatment for yourselves, would rather choose one who is careless about such details?

The Rubber Dam is not only indispensable in cases of pulp treatment, gold foil restorations, or preparation of deep cavities where infection may appear, but it is also most helpful in many other cases where it makes it so much easier to keep a clear operating field, with the aid of an air syringe. If you have failed up to now in apply-

ing the Rubber Dam, you should persevere and not put it aside forever. This is being done only by those who prefer to consider it as something inhuman. Fortunately, they are outnumbered by those who find it extremely valuable and easy to apply in almost any case. Black does not fear to establish at 95% his percentage of success, adding moreover, that it is one of the easiest procedures to handle for a dentist.

So it would be considered inhuman to use the Rubber Dam! In that case, one might very well question other methods employed by such an operator. According to Black, its usefulness for a number of operations where it might be deemed unnecessary, helps to save time, and moreover is the key to success in each case where it is being applied.

Now, as far as reading text after text is concerned, I can understand how tedious this may become, especially when details are too numerous. Naturally, it is impossible to deal with each case separately; some general rule must be established to cover at least those cases which are more often encountered. This is what makes Black so interesting and practical as an author. As mentioned previously, perseverance is absolutely essential and daily checkups on reason for failures will help to bring about corrections. The next time, you will find it easier, and only then will you be able to fully appreciate its true value.

At the Faculty of Dentistry, University of Montreal, where I devote all of my time, I naturally encounter many different cases, and this, you will admit, has conferred upon me a certain experience in the matter. May I point out that considerable improvement has been noticed since we have adopted the method of forcing students in Operative Dentistry to prepare cavities with the Rubber Dam in place. Junior and senior students seldom take longer than one week before getting thoroughly acquainted with the Rubber Dam. After that, they impose its application on the patients, well arm-

ed with convincing arguments and feeling sure themselves that its use is of the utmost importance. Very few patients offer any resistance and the student's judgment is seldom wrong; interference on the part of the professor will generally confirm the decision taken by the student. He has learned how to manipulate the Rubber Dam and has acquired a certain dexterity, even in cases where it is sometimes quite difficult.

One cannot truthfully say that the technique is complicated, providing one has started off with prophylaxis, taking care to remove tartar, thus eliminating all danger of tearing the rubber. Its application becomes easy if one has applied cocoa butter at the right spot, with bucco-lingual movements, after having stretched it, in order to make it thinner. If this is not sufficient, a ligature will force it through. If the holes have been made at the proper place, let us say at a distance of 3 or 4 mm. the Rubber Dam may be inserted in no time. An operator who has had some experience should be able to make perforations at the right places simply by eye-sight measuring. In the case of an occlusal cavity, it is not always necessary to include more than one tooth. As long as the neighbouring teeth are covered with the rubber, you may keep the Rubber Dam in place by using a clamp to maintain its position. This gives a wider operative field and a clear view. In the case of two proximal cavities facing each other, these may be prepared more quickly, and with dryness maintained, if precaution has been taken to reserve the space required between perforations to cover the whole septum, which is pushed beyond the gingival wall by means of a ligature or Beaver Tail burnisher. A well-chosen clamp, solidly fixed at the neck of the tooth, will maintain everything in place.

Remember that a fine operator, either physician, surgeon or dentist, is judged by the amount of science he possesses, his ability to display it, and the importance he gives to such details.

ARE YOU GUILTY OF . . .

AMALGAM FAILURES DUE TO FAULTY CAVITY PREPARATIONS?

by Dr. CAMERON ADAMS, Toronto, Ontario.

MANY good operators consider amalgam second only to gold foil as a filling material." This is true if amalgam is treated with the same care that most dentists give to their gold restorations. Since a great percentage of our amalgam failures is due to faulty cavity preparation, it might be advisable to review our individual attitudes periodically.

Dr. G. V. Black defined cavity preparation as: "... the mechanical treatment of injuries to the teeth, caused by dental caries, as will best fit the remaining part of the tooth to receive a filling to restore its form, give it strength, and prevent recurrence of decay in the same surface." The same teacher gave us seven organized steps in cavity preparation: outline resistance, retention, convenience forms, removal of decay, treatment of the enamel and toilet. The same rules still apply. How often do we remember *all* of them?

The more common causes of failure in cavity preparations for amalgam restorations are: moisture contamination, lack of extension for prevention, lack of removal of undermined enamel and lack of depth for bulk of material. The reasons why we err in these respects are chiefly our rush to save time, and lack of proper anaesthesia, where needed, in order to complete the operation without exhausting both patient and operator.

MOISTURE CONTAMINATION

Moisture on amalgam at any stage in the technique prior to the initial set, will cause expansion of the filling in a few days. Such a filling cannot attain or retain a high polish; it will flake and pit under attrition. The more re-

cent methods of handling the material have eliminated the moisture contamination, such as was caused by palming. Our assistants are carrying their share of the load in this connection. What of *our* share in the balance of the routine?

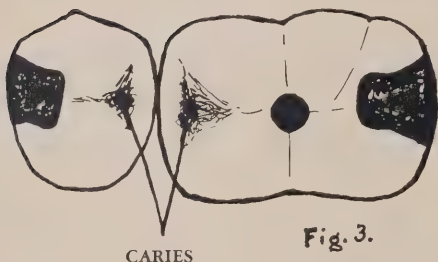
"To date there is only one method of gaining a dry field which will remain dry long enough to build a complete filling, and that is the use of the rubber dam." This opinion is shared by all amalgam authorities. Whenever possible the rubber dam should be placed before the amalgam is inserted since it not only saves time but also adds greatly to the comfort of the patient and the ease of the operation. Before the packing operation, all dampened areas of the cavity should be freshened with sharp hand instruments, whether the dampness be from blood, drugs or saliva.

LACK OF EXTENSION

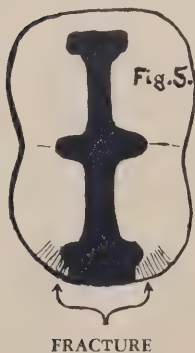
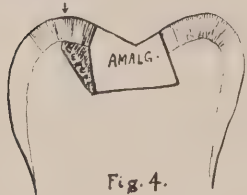
How many times a day do we see in x-rays the failures depicted in fig. 1? Clinically we find the proximal surface as in fig. 2, with decay having occurred at the points marked "x". To correct this failure our cavity preparation should be extended to the dotted line. Would we not have saved the patient additional discomfort and would not our consciences be free had this ex-



Fig. 1.

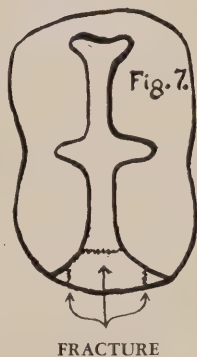
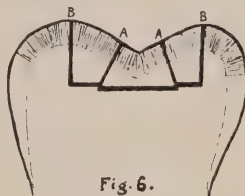


FRACTURE

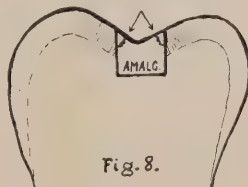


UNDERMINED ENAMEL

Undermined enamel is unnourished, brittle, and should be removed. In the majority of cases this operation is included in our outline form, but some of us are guilty of the technique shown in fig. 4, and eventually the patient returns for the necessary repair. Occasionally we see retention attempted at the expense of the proximal enamel as in fig. 5, with fractures occurring at the points indicated by the arrows.



DIRECTION OF MASTICATING FORCE



tension been made in our first treatment?

Many lower first molars show three or four "pit" fillings completed in as many appointments; and often we see the situation present in fig. 3.

For amalgam we should have full length enamel rods supported by dentine on all the cavo surfaces. When, for instance, the occlusal preparation is narrow bucco-lingually, the cavity

walls, if cut in the direction of the enamel rods, will not be parallel. This is indicated in fig. 6 location "A". Only in occlusal preparations that are wide bucco-lingually, with the cavity walls cut in the direction of the enamel rods, will these walls be parallel, as in fig. 6, location "B".

BULK

Failure to observe the necessity for full length enamel rods may lead to fractures in the amalgam in the occlusal and proximal portions of the filling due to lack of bulk of material as in

figs. 7 and 8. With class 11 cavities, the portion where the occlusal joins the proximal needs to have sufficient width and depth to allow for bulk of amalgam to give strength. It is essential to round off the axio-pulpal line angle and thus prevent an internal wedging pressure that may cause the filling to fracture under masticating forces. To further strengthen a class 11 restoration, and to prevent dislodgment proximally, retention is necessary in the bucco-gingivo-axial and the linguo-gingivo-axial regions of the cavity.

ANNOUNCEMENTS

Maritime Dental Association

The Annual Convention of this Association under the auspices of The Nova Scotia Dental Association, will be held at Digby Pines Hotel, August 30 to September 2, Digby, N.S.

American Dental Society of Europe. Amsterdam. July 19-22.

F. Douglas Derrick, 140 Park Lane, London, W.1.

American Dental Association Convention

The 91st annual session of the American Dental Association will be held at Atlantic City, Oct. 30 to Nov. 2.

Official application forms may be found in The Journal of the American Dental Association, beginning with the May issue. Accompanying the application forms are detailed maps indicating the location of each hotel and the rates for each.

Reservations may be obtained by filling out the application blank and mailing it to the A.D.A. Housing Bureau, 16 Central Pier, Atlantic City, N.J. All reservations will be handled by the Bureau. The applicant will receive confirmation of his reservation directly from the hotel.

School of Dentistry University of Pennsylvania

POSTGRADUATE COURSES

The School of Dentistry of the University of Pennsylvania is offering 36 Postgraduate Courses on 23 different subjects during the academic year 1950-51.

The Second Mid-Atlantic States Seminar in Oral Medicine at Skytop, Pennsylvania, is also being offered by the Post-graduate Courses November 5-10, immediately following the National A.D.A. Meeting in Atlantic City.

For further information about these courses write Director, Postgraduate Courses, School of Dentistry, University of Pennsylvania, 4001 Spruce Street, Philadelphia 4, Pa.

"Train a child in the way he should go, and walk there yourself once in a while!"
—Josh Billings

The Forum

PARODONTAL DISEASE

by E. WILFRED FISH, C.B.E., D.Sc., F.D.S. R.C.S. Eng.

Condensed from Br. D. Jour. March 17, 1950.

In the course of the gradual destruction of the parodontal attachment of a tooth two clearly defined stages may be observed. In the first a chronic or sometimes an acute ulceration at the gum margin causes degeneration of the subjacent epithelial cells so that the epithelium becomes detached from the enamel of the tooth. The ulceration then creeps down on to this subgingival epithelium so that there is ulceration at the bottom of the sulcus. The proteolytic products of this ulceration or it may be actual histiocytes, destroy the periodontal fibres one by one. As these fibres are destroyed the sulcus deepens, for there is no longer anything to stop it from tearing open. Not only are the periodontal fibres destroyed but osteoclasts appear in response to the toxic irritation and the bone of the socket is resorbed. The result of this is that the tooth loosens. Much more is already known of this process which we may call "the septic breakdown of the parodontal tissues"; but from the moment when the destruction has reached the point where the tooth begins to loosen in its socket, a new factor appears and the trauma of mastication oversteps the physiological threshold and becomes a mechanical irritant to the bone of the socket, no less capable of causing resorption of bone and destruction of the fibres than the toxic irritation derived from the chronic septic ulcers at the gum margin and in the sulcus. This, the second phase, we may call "the mechanical breakdown of the parodontal tissues."

In the first phase treatment must be directed towards getting rid of the sepsis, making the ulcers heal and hardening the epithelium at the gum margin so that the ulcers will not recur. To do this it may be, and generally is, necessary to make the region more accessible by gingivectomy; but the treatment proper is the hardening of the epithelium by friction. In the second phase, however, we are concerned with the trauma of mastication and the treatment is on quite other lines. Of course the marginal ulceration must be eradicated first but the mechanical problem must be solved too.

No doubt it will remain for the research man to tell us from his laboratory the rest of this story as to how the parodontal fibres are destroyed during the septic phase of the disease, whether by the activity of enzymes, which are always to be found in the autolytic products of the dying cells in the bed of an ulcer, or whether by the elusive histiocytes which, like osteoclasts, are seldom caught redhanded in the act of digesting intercellular debris. Indeed there are many aspects of both the pathology and treatment of this phase of the disease which we can usefully study, elucidate and broadcast.

Perhaps the greatest danger to the new practitioner in the parodontal field is the old besetting sin of half-measures. Often patients with detached and friable papillae are told to use woodpoints without first being submitted to a toilet of the gum margin. The

result is that the detached papillae, which should have been removed, are torn, and the parodontal condition deteriorates even more rapidly than before. The patient's faith in us and hope for a cure grows dim, the practitioner is discouraged, and a simple early case slips away to the extraction room. Another pitfall is just this picture in reverse; the operation of gingivectomy is performed, more or less radically, but by some strange oversight the patient is not instructed in the correct method of hardening the new epithelial covering of the gum margin by daily friction. Perhaps he is told what to do but without being given further appointments for review and without due emphasis being laid on the need for the friction to be maintained; so that after a while the case relapses, if indeed it ever gets cured, and both the patient and the practitioner lose hope in the possibility of a permanent cure. The worst case of all is when the gingivectomy is done, but incompletely. It may be done on the labial aspect of the lower incisors while the more important lingual aspect is left. It may be done both lingually and buccally but without the deep granulation tissue bed of the ulcers being curetted away, so that the new epithelium grows over this soft inflamed tissue and can hardly be made firm even by the most determined friction.

Plenty of clinical problems remain to be solved: there is the difficulty of the isolated deep pocket, especially when it occurs on the interproximal or labial side of an upper incisor, there are young children with chronic gingivitis, often hypertrophic, who are too young to tolerate a local anaesthetic and too inconsequent and too lacking in perseverance to maintain daily interdental friction. There is even the unremitting search for a simpler way of keeping gum margins healthy than by toilsome daily friction; I am afraid it is as vain as the search for the elixir of life.

I want, however, to draw attention more particularly to the second cause of parodontal breakdown, the mechanical cause. It is generally recognized, that too great a lateral strain on a tooth during mastication will ultimately cause the tooth to loosen. Bone will be resorbed and even the periodontal sling may be torn. Bacteria may be trapped in a damaged lymphatic vessel of the parodontal membrane and form an abscess which will cause further destruction and undermine the stability of the tooth still more deeply.

Much study has been devoted to "bite rehabilitation," a procedure by which freedom of lateral movement is provided or restored by removing cuspal interference by spot grinding. There is no doubt that this is a useful exercise and all of us have at least relieved the lateral strain on an individual tooth by this means when the patient has had plenty of other teeth to bite on; but the major problem arises when a number of teeth have been lost or all the teeth have loosened, so that none can stand the strain of ordinary mastication without mutual support. It is a most unfortunate circumstance that so often the posterior teeth are extracted for a patient with early parodontal breakdown on the pretext of "getting rid of the worst of them." Having lost in this way the teeth which should take the vertical strain, it is impossible to prevent the gradual mechanical destruction of the upper front teeth, which are not only now exposed to the full vertical stress of mastication, but must take this strain at a most disadvantageous angle.

It would seem that the most hopeful solution to this problem of traumatic occlusion, when it has become a real and imminent menace, is to be found in some kind of splint which will provide mutual support for the teeth, so that united they may withstand the masticatory strain, though separately each soon would fall.

The man that makes a character makes foes.—Edward Young

THE CONCEPT OF ACTION AS A MEASURE OF LIVING PHENOMENA

by MARTIN RUDERFER, Brooklyn, New York

Excerpts from Science, Sep. 9, 1949

The components of basal power, surface area (size), and basal metabolism may each independently affect life span.

Life insurance companies have carefully studied the relation of size to life span for many decades. One reports: "Studies show that body girth and length of life vary inversely with each other. Overweight is distinctly detrimental to health and tends to shorten life."

The majority of centenarians are small in size and are frugal eaters.

Physical and psychic factors may affect basal metabolism.

Slonaker found that voluntary exercise in albino rats decreased the life span 18.8 percent compared to a control group that was given no facilities for exercise.

In an exhaustive study, Pearl discovered that continued hard labour reduces the life span after the age of 40, but not before. Since his subjects were insured persons who had been in their respective occupations most of their lives, those in hard-working occupations always had an above-normal power consumption, and hence used up their supply of action at an early age. It is interesting to note that, since deaths of healthy but hard-working persons begin to occur at the age of 40 and not before, as Pearl found, then

the maximum sustained physical exertion that normal man can tolerate over a long period of time increases power consumption to such an extent that the normal value of action, and consequent death, are attained soon after the age of 40. Any greater exertion would presumably incapacitate the worker early in his career and prevent further labour at this extreme rate.

Pearl, in a study of more than 2,000 individuals who lived to the age of 90 or more was able to find only one significant trait among them, outside of their longevity, wherein the group differed from the rest of mankind as a whole: their calm mental make-up. They all were possessed of a placid temperament, were relaxed, and were rarely worried.

Brody points out that mental factors causing insecurity and tension shorten the duration of life in many ways.

Married persons live considerably longer than unmarried persons. The security and regularity of wedded life probably reduce the tension and insecurity that more often accompany the single state.

Urban dwellers have a much lower life expectancy than rural people, although the gap is gradually decreasing.

For single cells, it is a well-known cytological fact that, in general, increase in food consumption of cells produces a decrease in life span.

THE WRITING OF PAPERS

Generally speaking, short papers are harder to write than long ones. It takes more trouble to prevent oneself from using unnecessary words. Obviously, it is easier to say everything that comes into the mind than it is to examine everything before selecting it. But is such selection worth the trouble? It certainly is from the point of view of the reader. The

author's very natural difficulty is to stand away and look at his own writing. He should remember, however, that, other things being equal, short papers are more likely to be read than long ones. Long papers are not necessarily refused, but length is a handicap that only the best entries can overcome. A good average for an article is about 3,500 words.—*Can. Med. Assoc. Jr. Feb. 1950.*



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Editorial

The Late Dr. Thomas Cowling

The sudden passing of Thomas Cowling M.A., D.D.S., B. Paed., on April 16 removed a colleague of experience and knowledge in both teaching and administration from the staff of the Faculty of Dentistry, University of Toronto.

Mr. Colin Rous, Secretary of the Faculty Council, in preparing a tribute on behalf of the council writes—"This council has suffered a severe loss in the death of Thomas Cowling who was for so many years associated with this Faculty of Dentistry.

Dr. Cowling was graduated from the University of Toronto in 1912 with the degree of Doctor of Dental Surgery. After teaching for a time, however, he felt the need of wider training and he accordingly enrolled as an extra-mural student in McMaster University, receiving its degree of Bachelor of Arts in 1923 and of Master of Arts in 1925. Not content with this, and in the belief that every teacher should have a knowledge of pedagogy, he enrolled in the Ontario College of Education and in 1929 he had conferred upon him the degree of Bachelor of Pedagogy.

He received his first teaching appointment in 1913, and continuously thereafter until the time of his death he held an appointment, first upon the staff of the College of Dentistry of the Royal College of Dental Surgeons, and, after the creation of the Faculty of Dentistry, upon the staff of this institution. He was for many years Professor of Dental Technology

and Metallurgy, and, in addition, in 1942, he was made Assistant Dean following the institution of that office. He was elected to the Senate of the University of Toronto in 1937 and he continued to serve on that body from then until the time of his death.

Dr. Cowling had a love for literature; he was in demand as an after-dinner speaker, and he wrote many articles for publication. He was for long years the Editor of *Oral Health Magazine*, and he was latterly as well the Associate Editor of the *Journal of Dental Education*.

Although a modest, shy, reserved man, he had a warm affection for his fellow men. He is mourned by the whole undergraduate student body of the Faculty, by hundreds of graduates who, as students, benefitted by his instruction, by his colleagues on the staff of the University, and by scores of friends in other walks of life. In his younger days he was a member of various debating societies. He was a member of University Lodge, A.F. & A.M., of University Chapter of the Royal Arch Masons, and a 32 Scottish Rite Mason. He was a member of the Canadian Dental Association, of the Ontario Dental Association, of the East Toronto Dental Association, and of the International Association of Dental Research.

While he resided in this city all his life, he was keenly appreciative of nature and he loved to drive out into the country whenever the opportunity offered itself. At other times he had to content himself with the flower garden at his home in which he took great delight. He was a man of high ideals and rigid moral standards and did many kindly and charitable acts in a very quiet way. In his death, Toronto has lost a fine citizen, the profession of dentistry an outstanding figure, and the University a loyal and gifted teacher."

Dean Emeritus Dr. Arnold D. A. Mason who was associated with Dr. Cowling throughout his connection with the Faculty and who knew him very intimately writes a further tribute. "To-day the University of Toronto and the Faculty of Dentistry in particular are much poorer because of the passing of Dr. Thomas Cowling. It seems a pity that he should have been cut off so early in life at a time when his great abilities could have made a greater contribution to his chosen profession. He was a dentist of culture, having carried his education beyond the field of dentistry. Not only was he trained academically but he was a great reader and always a student steeped in fine thoughts of tradition as well as a close observer of current movements. He was an inspiration to students who came under his influence, teaching them to become citizens interested in the welfare of humanity. He was a writer of unusual ability and his influence went far beyond Canada. He was a man of good judgment and never arbitrary; his vast knowledge made him temperate and tolerant of the views of others. He was patient with those who differed with him even to sacrificing his own ideas and submitting to suggestions of others possessing less ability. Out of this patience he developed a kindliness and a charity to those who had been less fortunate in life's battles. He was retiring even to the verge

of shyness always believing that good would prevail in the end. Many will remember Dr. Cowling as a talented speaker, provocative of deep thought and at the same time tempered with wit and humour. He stimulated the minds of his listeners and they were refreshed by the joy of the occasion.

As a confrère on the faculty and especially throughout the last war, he was a close friend and of great assistance in all problems which arose. Industrious to the point of exhaustion and loyal beyond one's expectations, Thomas Cowling will ever remain fresh in my memory and affection."

Such is the record and the footprints of the late Dr. Cowling by those who knew him best. While he was a man recognized for his knowledge and ability yet his capacity and potential was relatively unknown. This characteristic perhaps was borne out in a recent report that he prepared for the Committee on Education of the Canadian Dental Association. This comprehensive work was exhaustive and complete; it portrayed his wealth of experience in dental education, his capacity for detail and an unique understanding of educational principles. It was perhaps the pinnacle of his writing career. It was a culmination of a life devoted to dental education.

The memory of Thomas Cowling will remain with those who knew him and came under his influence as a conscientious teacher, a learned educationist, a gifted writer and speaker, a quiet, sensitive, modest man and a good citizen.

T. R. M.

Dr. John Clay Receives Honorary Law Degree

In the Provincial News Section of this issue of the Journal there appears an article under Alberta News about Dr. John Clay of Calgary who on May 17 is to have conferred on him the honorary degree of Doctor of Laws at the Convocation of the University of Alberta. In this way his home province seeks to recognize the service to dentistry, the service to the province, the service to the City of Calgary and to mankind generally of a great and good man.

Dr. Clay was president of the Canadian Dental Association for two terms, 1927 and 1928, during the period that the Association was re-organized and placed on its present firm basis. It was due in no small measure to his gifts of leadership that all went so smoothly and efficiently. He was a leader then and is still looked upon as a leader in Canadian dentistry, particularly in the west where his influence is always felt in any worthwhile project associated with our profession.

There is something about John Clay which stamps him as being great, something that inspires the younger men who come under his influence to live nobler and better lives. Being endowed with intellectual power and magnetism, and a great measure of common sense, it is only natural that he should become the nucleus around which has centred a host of men who turn to him for help and advice.

Because of the large number of graduates, convocation will be held on two days. Honorary degrees are to be conferred on Dr. Ernest Gruening,

Governor of Alaska; Dr. Robert Newton, President of the University; Mr. L. C. Charlesworth of Victoria, for many years a prominent official in irrigation development in Alberta, and Dr. John W. Clay. Dr. Clay will give the convocation address on May 17 and will be presented by Dr. W. Scott Hamilton, Dean of the Faculty of Dentistry of the University.

May the young men in Dentistry profit from a study of the life of this great dentist who is being honoured at this time, learn of his lofty patriotism, his dignity, his fidelity and courage that constitute the worthy citizen. The greatest of historians told us nearly two thousand years ago: "The form of mind is eternal and can never be preserved by any foreign material or art, but only by the real character and behaviour of the persons who imitate it."

M. H. G.

International Dental Journal

The Fédération Dentaire Internationale announce that they will shortly publish a new quarterly journal — the INTERNATIONAL DENTAL JOURNAL—under the chief-editorship of Professor H. H. Stones, Director of Dental Education at the University of Liverpool. It is intended that the journal shall provide a truly international review of new discoveries and developments in all branches of dental science; to ensure this world wide coverage, correspondents for different languages have been chosen from among the most eminent dentists in Europe and elsewhere.

A section of the Journal will be devoted to the Bulletin—the record of domestic matters of the F.D.I. In addition the Journal will provide the only official record of the Quinquennial International Dental Congresses. The four issues prior to each Congress will be devoted to the various papers which are to be submitted to the Congress. The four subsequent issues will record discussions arising out of these papers and commentaries on any exhibitions which may have been held.

The Journal will be printed in English but in addition the table of contents, subheadings and summaries to articles, and captions to illustrations will be printed in French, German, Spanish and Italian.

The Journal will be fully illustrated with photographs, diagrams and tables.

Publication will start in September 1950. Subscriptions may be placed with the distributors, Messrs. Cassell & Co. Ltd., 37/38 St. Andrews Hill, London, E.C.4., or with any bookseller. Annual subscription. £2. 5. 0. post free. Single copies 12/6. post free.

M. H. G.

Erratum

In the paper entitled "The Corrosion of Cobalt Chromium Alloys in Commercial Cleaning Agents" which appeared in the February issue of the journal, the name of the third author should have read, "Hector Robert MacLean" and not "Herbert Robert MacLean".

ROYAL CANADIAN DENTAL CORPS NEWS

1. Lieut.-Col M. L. Donigan assumed Command of No. 15 Base Dental Coy. R.C.D.C. (R.F.) effective 1 December 1949, not No. 3 Company R.C.D.C. (R.F.) as previously announced in the April issue.
2. Lieut.-Col. W. H. Smith vacated the Command of No. 7 Coy. R.C.D.C. (R.F.) on 31 January 1950. Lieut.-Col. Smith was the original Commanding Officer. Major H. R. McLaren was promoted to the rank of Lieut.-Col. and appointed to Command effective 1 February 1950.
3. Major G. E. Shragge reported to the Dental Directorate, A.H.Q., for duty on 15 March 1950 as an A.D.D.S. Major Shragge served with the Army of Occupation until 1946. On return to Canada he was posted to Western Canada for duty.
4. Major J. A. MacGowan was posted from the Directorate in Ottawa effective 15 March 1950 to No. 11 Coy. in Edmonton

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Courses in Dentistry For Children

During recent years courses in dentistry for children have been conducted in all the provinces. Latterly, the ready availability of a Specialist in Paedodontics was made possible through the fact that Dr. S. A. MacGregor was employed by the Department of National Health and Welfare. This arrangement has now been terminated.

The policy of the Federal Department is to initiate such programs and after carrying the project for a sufficient period to suggest continuance to the provincial departments. In this case the federal department now states that if these courses are considered desirable, financial support may be obtained under the General Public Health Grant of the Federal Government.

The procedure in this matter would be for application to be made to the provincial department of the province concerned in respect to a definitely stated program. If the provincial department approves, the project is submitted for confirmation to the federal authorities who have stated they will look favourably upon such presentation.

The Cost

(Third in a series on the British Scheme)

The British Scheme is not an insurance arrangement as we understand insurance. Financially, the health service may be described as a state endowment service to the extent of 4/5ths or more and as an insurance service to the extent of 1/5th or less of the cost; that is as originally planned. The costs have been much greater than estimated so that the

fractions are now even more disproportionate. (Approximately 8/9th endowment and 1/9th insurance.) This means that for the most part the financial support of the scheme comes out of general taxation. The weekly contribution (insurance part) made by the individual for the health scheme, actually amounts to approximately 6d. to 10d. Through the fact that the amount contributed is low, the average citizen thinks the service is cheap, which is good politically. He also may surmise that he was grossly overcharged under the former private practice system.

The actual operating cost for the first year was much greater than the estimated cost. The actual cost of the dental service was three times the estimated cost and that of the ophthalmic service was nearly seven times the estimate. The medical services ran about 1/10th more which indicates that the estimated cost could be more accurately established upon a per capita basis of payment.

Often in the planning for health services the dental service has been brought in as an appendage with little real investigation of the cost. It would appear that to some extent this was done in the British Scheme and has proven to be an embarrassing financial feature for the Government. According to the published figures for the first year of operation the cost for 10,000 dentists rendering dental service was 21.8 million pounds, whereas the cost for approximately two and one-half times as many medical practitioners rendering medical services was 33.8 million pounds. Consideration must also be given to the fact that considerably less of the population was served by the dentists than by the medical practitioners.



Corner of Waiting Room in Children's Dental Clinic, University of Alberta, Edmonton

NEWS FROM THE PROVINCES

ALBERTA

University of Alberta

Any Wednesday at 1:00 P.M. one can go to the Dental Clinic of the U. of A. and in the large and beautifully furnished waiting room can be seen from 50 to 70 children ranging anywhere from 2 to 12 years of age. They are all waiting for their appointment with their "dentist".

One has always heard of children having mournful expressions when they are taken to the dentist but not here. The feeling here seemed to be "when do we get started?" Many of the children were escorted by their mothers, some with their "slightly older" brother or sister and many alone.

When the time came for them to go into the clinic, there was quite a scramble to get to the cubicle where their "favourite dentist" was, they quickly climbed into the "chair", opened their mouths and the atmosphere was one of "get going".

It is hard to realize that 50 small children were in cubicles in one large room, receiving dental attention as not a sound emanated from any one of them for a long period, and then a new patient who was making her first trip and being accompanied by her mother was a little frightened at the various instruments in the cubicle.

It is a rule that no mothers are allowed in

the clinic when the children are receiving dental treatment and a trip around the room shows that they are unnecessary as each child seemed to have great confidence in the operator, in fact, there were three patients who were fast asleep while their dentist was drilling out the decay in their teeth. It was most interesting to see some patients so small that their feet were just sticking over the edge of the seat.

On examination of the type of work done, it was noted that many extensive restorations were being placed in both deciduous and permanent teeth—space retainers of acrylic and even partial dentures were inserted. Stainless steel crowns were used in many cases for repair of many teeth, and it was fascinating the way the children took great pride in the appliances which were in their mouths and also the restorations put in their teeth.

When one sees a youngster five years old run out from the clinic to his mother in the waiting room and pointing to his mouth shout out "Look what I had done today, Mummy", it makes you realize the kind of a job that is being done in this line of work at the U. of A.

The children's clinic was started several years ago when Dr. H. Bulyea was director of the School of Dentistry, and has developed now under Dean Hamilton until it is a recognized part of the dental course of studies.

Dr. W. Orobko, Asst. Professor of Operative Dentistry is in charge of this department and is ably assisted by Dr. Robert Blaquiere and Dr. Harold Samuels.

The aims of the course presented by these men are to:

- 1) Acquaint the student with the usual work to be done for pre-school and school age children.
- 2) Intensive familiarization with the usual types of operative and exodontic procedures routinely followed for children.
- 3) To familiarize the student in child management.
- 4) Prevention in all its forms as applied to children's dentistry.
- 5) The most important aim being to create a liking and stimulate a desire in the young graduate, to look after children in his practice, i.e. not to make specialists of them, but to help them to properly fit children's dentistry into their general practice.

W. E. A

**Dr. John W. Clay Honoured by
University of Alberta
UNIVERSITY OF ALBERTA
CONVOCATION**

May seventeen, nineteen hundred and fifty

Chancellor—Dr. G. Frederick McNally

President—Dr. Robert Newton

Crest

Eminent Chancellor,

I have the honour to present

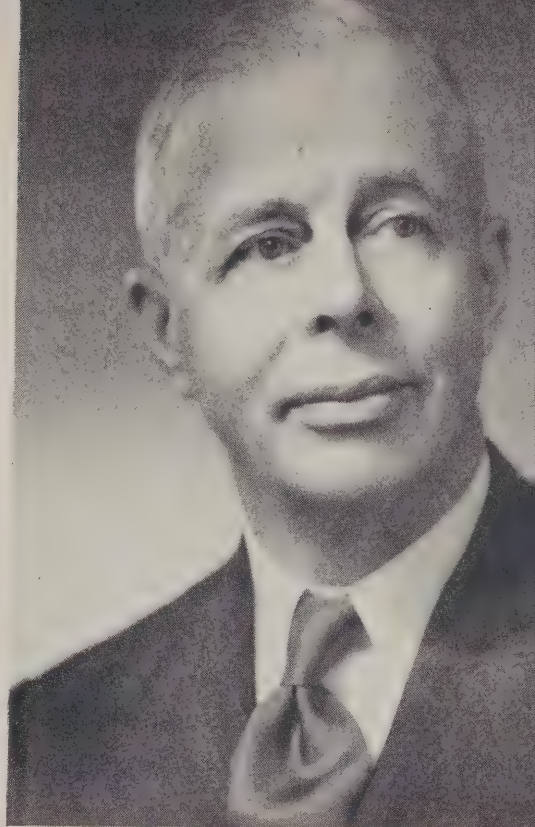
John William Clay.

Dr. Clay was born at Halifax, England, and at an early age came, with his parents, to the Province of Ontario where he received his preliminary education.

In the year, nineteen hundred and five, he was graduated in Dentistry from the University of Pennsylvania, and a year later from the University of Toronto.

After practising his profession in Ontario for a year he located in the city of Calgary where he has since made his home.

Dr. Clay has been a great influence for the betterment of his profession, not only in this province, but throughout Canada and the United States. It is appropriate that the conferring of this honour should coincide with the convention of the Canadian Dental Association at present in session in Toronto, on



DR. JOHN W. CLAY

the occasion of the seventy-fifth anniversary of dental education in Canada.

He is also famous as an exemplary citizen, for his interest in such organizations as the Board of Trade, the Institute of International Affairs, and for his contribution to the cultural life of the community through his support of the Institute of Art, the Symphony Orchestra, and through many other channels.

Dr. Clay has been presiding officer over many of the professional and cultural organizations to which he belongs, but perhaps his finest contributions have found expression in a less spectacular manner. He is known for his friendly counsel to the young people who, from time to time, have entered or sought to enter the profession. His interest in education, and that pertaining to this university in particular, has attracted his attention for many years. As honorary visiting lecturer on our faculty, our students continue to benefit from his long experience, and he has given expression to his knowledge in some twenty scientific publications.

Early recognition of his outstanding professional skill and conduct was expressed in

nineteen hundred and twenty-nine when he was made a Fellow of the International College of Dentists.

Eminent chancellor I present
John William Clay
for the degree of
Doctor of Laws, Honoris Causa.

Presented by Dean W. Scott Hamilton, Faculty of Dentistry.

JOHN WILLIAM CLAY

Address: 901 Greyhound Building, Calgary, Alberta.

Age 63.

Born at Halifax, England.

Public and High School Education, Toronto, Ontario.

Graduated from University of Pennsylvania, 1905.

Graduated from University of Toronto, 1906. Fellow of International College of Dentists, 1929.

Honorary Lecturer, University of Alberta since 1939.

Member of University Dental Library Committee.

Member of the Quota Committee, Faculty of Dentistry.

Chairman, University Liaison Committee of the Alberta Dental Association.

Staff of Holy Cross Hospital since 1941.

Lecturer to nurses, Holy Cross Hospital since 1942.

Registrar, Alberta Dental Association, 1920-23.

President, Canadian Dental Association, 1926-27, 1927-28.

Vice-president, Western Canada Dental Society, 1949.

Calgary representative to the Institute of International Affairs, where he served as president.

Active on the Board of Trade.

A strong supporter of the Symphony Orchestra and the Institute of Art.

An enthusiastic fisherman, hunter, and golfer.

The Index to Periodical Literature shows that he has contributed about twenty scientific articles.

There are numerous unrecorded and intangible ways in which Dr. Clay has proven himself to be a leader, not only in his profession but as a citizen as well. He is noted for his generosity in spending his worldly possessions

for the good of mankind, but more important, I have personal knowledge of how he has given counsel to young men in the profession who have made the error of violating its ethical and moral standards. He is constantly on the look-out for suitable young men to enter the study of dentistry.

SASKATCHEWAN

Saskatoon Dental Society

The last meeting of this society took the form of a film evening. There were two films on "General Anaesthesia at the Dental Chair", one featuring adults and one children. A discussion followed.

The meeting ended with a coloured film on the Grey Cup finals between Calgary and Edmonton.

L. D. H.

Dental Health Address

Prevention of Dental Decay was the theme of the address given by Dr. Mabel Connell to the members of the Connaught Home and School Club at its April meeting. She stressed the need for people to be educated to the need of better dental health using slides to illustrate her address.—*Prince Albert Herald*.

MANITOBA

Winnipeg Dental Society

The Winnipeg Dental Society completed its 1949-1950 season on Monday April 17 by approving in principle of a plan to conduct a clinical dental examination of all Winnipeg School Children from the kindergarten through grade 6 by volunteer members of the Society who will give this unremunerated service for a year as a gesture in the interests of preventive dentistry. This is a commendable ending to the best year the Society has enjoyed.

The new executive for the coming 1950-51 season consisting of President J. B. Rumberg, Vice-President J. O. Brown, Clinic-Chairman Ernest Wallace, Secretary-Treasurer F. W. Jones, and A. V. Johnson and T. J. Cooke now have the opportunity to equal and if possible surpass the accomplishments of the retiring executive of past President B. A. Oja and his group.

All this took place on Monday. On Saturday, the Society members were guests of the Manitoba Chapter of the Alpha Omega Fraternity who had as a guest speaker the Professor of Operative Dentistry, Dr. W. Simon, of the University of Minnesota.

Dr. Simon is a naturally gifted teacher. He has the information and can impart it as few can. How fortunate the University of Minnesota is to have a man with his ability as the Professor of Operative Dentistry! We confidently expect that Dr. Simon's recent visit will not be his last to Winnipeg. J. F. M.

Manitoba Dentists Honoured

Two members of the Manitoba Dental Association have within recent months been honoured in recognition of outstanding and meritorious service as members of the dental profession and in recognition of their contributions to the Arts and Sciences of Dentistry. They are Dr. J. H. Merkely who has been made a Fellow of the American College of Dentists, and Dr. J. F. Morrison who has been made a Fellow of the International College of Dentists. M. H. G.

ONTARIO

Toronto Study Club of Dental Technicians Holds Annual Banquet

This Club held its annual dinner at the Royal York Hotel, Toronto on April 12.

President Charlie Mellish presided and opened the business meeting following the dinner by thanking the officers for their splendid work throughout the year. He neglected to say however, what a grand job he did himself as President of the group.

Dr. Arnold A. D. Mason was the guest speaker of the evening and gave an account of his trip to Australia and New Zealand last year. He illustrated his travelogue with coloured movies all of which made the trip very realistic and inviting.

Mr. Wm. Walker thanked Dr. Mason for a most enjoyable evening.

It was with deep regret that the Study Club members record the death of Mr. Charles P. Elliott of Hamilton on April 13. He conducted one of the largest dental laboratories in eastern Canada and was a loyal hard working member of this club. He was well liked by all who knew him.

He is survived by his widow and one daughter.

Faculty of Dentistry News University of Toronto

Dean Ellis addressed the combined staffs of the Division of Health Sciences of the University of Washington in Seattle on May 2

and he also spoke before the Seattle Dental Association.

On May 6 and 7 he presented papers before the British Columbia Dental Association at Kamloops, B.C.

Congratulations to Dr. Robert E. Moyers, Professor and head of the department of Orthodontics on winning the prize essay contest of the American Association of Orthodontics for 1950. The title of his paper was, "An electromyographic Analysis of Certain Muscles Involved in Movement at the Temporo Mandibular Articulation."

The rules for this contest state that any members of the American Association of Orthodontists or any person affiliated with a recognized institution in the field of dentistry as a teacher, researcher, undergraduate, or graduate student, is eligible to enter the competition. Each essay submitted must represent an original investigation and contain some new significant material of value to the art or science of Orthodontics. Dr. Moyers has been invited to present his dissertation at the meeting of the American Association of Orthodontists in Chicago, Illinois, May 8-11, 1950.

Ladies' Auxiliary to the Academy of Dentistry, Toronto

Mrs. W. W. Philp was re-elected President of this organization at the annual installation luncheon held at Prince Arthur House, St. George St., Toronto.

Dr. Earl Bancroft, President of the Academy of Dentistry, extended to the Auxiliary good-will wishes.

Treasurer, Mrs. W. L. McMachen, reported that the approximate sum of \$850.00 was raised and donated to the University for needy children with dental abnormalities.

Nominating convener, Mrs. A. F. Cooper, announced the 1950-51 Executive as follows:—
President Mrs. W. W. Philp
1st Vice-President Mrs. F. H. Shepherd
2nd Vice-President Mrs. J. E. Verth
Recording Secretary Mrs. W. C. McLean
Corresponding Secretary Mrs. J. G. Glascott
Treasurer Mrs. W. L. McMachen
Councillors Mrs. E. Bancroft
Mrs. H. K. Box

Mrs. D. L. Mackenzie

Mrs. R. W. Marshall

Mrs. K. M. McPherson

Mrs. H. Milburn

DOROTHY J. MCPHERSON

ANNOUNCEMENT

Eastern Ontario Dental Association Convention will be held at the Chateau Laurier Hotel at Ottawa, September 17, 18, 19.

Dr. I. F. Calder, Brockville
President

Dr. E. S. McCartney, Ottawa
Secretary Treasurer

Northern Ontario Dental Association Convention will be held at the Legion Memorial Hall in Sudbury on Saturday, September 9.

Dr. V. S. Fournier, Sudbury
President

Dr. A. R. Kaukinen, Sudbury
Secretary Treasurer

Dental Public Health At Our National Convention

Early on the opening day—8 a.m. to be exact—a breakfast meeting was held in the interests of dental public health. For some years now this function has been held annually at the same hour and on the opening day of the Ontario Dental Association Convention. It is now a recognized feature and this year more than 125 dentists were on hand; late comers were disappointed because all available chairs around the breakfast table had been filled.

Dr. Harold Beach of Ottawa was chairman of the meeting and Dr. E. W. McHenry, Professor of Public Health Nutrition, University of Toronto, was guest speaker. Among the guests at the head table were Dr. J. B. Parfitt representing the British Dental Association and Dr. C. I. Taggart of Burlington, Vermont representing the American Dental Association.

The Chairman's remarks in opening the program were most appropriate for the occasion—said he, "It seems especially fitting that this annual Dental Public Health breakfast meeting should open our Convention whose theme has been declared to be *prevention and conservation*.

"The people look to dentists for leadership in combatting dental diseases. If progress is to be made toward a healthier and better race then it is obvious all dentists must practice prevention. A well known figure in public health has said, 'You can only cure retail but you can prevent wholesale.'"

The chairman went on to point out that the newer knowledge now being offered through lectures and courses in preventive dentistry and dental public health points to a new conception of dentistry and new hori-

zons in dental practice; all of which will make an impressive contribution to the health and welfare of Canadian people.

"It is all a part of the heaven," said the speaker, "that creates the answer to the health problems of each succeeding age by helping to roll back the frontiers of disease and ignorance and thus herald the dawn of a new day, happier, healthier and more free." Continuing the chairman said, "For some time now, dental public health programs have been in operation. There is no longer any doubt as to the effectiveness of many preventive measures advocated and offered to the public.

"People are beginning to believe what dentists have been telling them about preventing dental diseases and conserving dental health—that is one reason every dentist is so busy.

"Let us therefore pay careful attention to what is offered in preventive and dental public health knowledge and so be equipped to play our part in dentistry's future because *these things shall be* and one does not want to be left behind like the dinosaur."

Dr. Glen Mitton introduced Dr. McHenry who presented a fine lecture setting forth the relationship of nutrition to dental health and dental diseases.

"The amount of tooth decay in Canada", said Dr. McHenry, "can be decreased by better food habits. Caries is caused by acid in the mouth produced by bacteria and the acid is formed from sugar. The consumption of sugar has increased in Canada such that Canadians now obtain one-seventh of their food energy from sugar but sugar makes no other contributions to the diet—it lacks minerals and vitamins. Cereals and potatoes are inexpensive sources of energy and also supply protein, minerals and vitamins. One third of the average intake of vitamin C in Canada comes from potatoes and over one fifth of the

total consumption of iron, thiamine and niacin comes from cereals.

Surveys on Canadian school children, Dr. McHenry said, have shown that 30 to 40 per cent use too little milk and fruit and that a great many children (up to 90 per cent in some groups) do not get the vitamin D needed for the normal growth of teeth and bones. Children who drink small amounts of milk have been found to spend twice as much money on sweet foods as do children who use milk liberally. Sweet foods, especially just before meals, dull the appetite and prevent the eating of proper amounts of healthful foods. Dr. McHenry urged that dentists and health officials combine to urge a restriction in the use of sweet foods.

Properly formed, healthy teeth are more resistant to decay than poorly formed ones, the speaker stated. To obtain good teeth it is necessary to start in pregnancy; expectant mothers should receive ample calcium from milk and at least 800 units of vitamin D a day. These nutrients are commonly given to infants but must also be consumed by pre-school and in-school children.

Infants are now better fed than was the case a generation ago but nutrition education has still a job to do for children. Dr. McHenry advised a concentrated program to induce children to eat, and parents to provide, at least a pint of milk, fruits and vegetables, and 400 units of vitamin D a day for every child.

The dental public health committee did a masterly job of publicizing and giving meaning to the Convention theme of prevention and conservation. When you entered the great dining hall of the hotel for lunch a thousand dentists were confronted with a dental public health sign massive in size and then sat down to a nutritious lunch, especially arranged for the occasion. Then the speaker of the day, Mr. John Fisher in his address traced the progress of dental education concepts in eras over the past 75 years.

1. Relief of pain
2. Age of the craftsman
3. Relation of tooth health and general health
4. Early diagnosis and corrective dentistry
5. Preventive dentistry

"The real job of dentists," said Mr. Fisher, "is to eliminate the need for dentists—which of course will never come. As the view point

of dentistry enlarges, dentistry progresses. Remember," said he, "there are always objections and skepticisms to new progress but just the same, keep on building."

His closing admonition was to look to your horizons of better dental health education in terms of nutrition, fluorides, etc. May the dentists' view point continue to be a well known dental phrase, "Wider Please."

In a similar manner did Dental Public Health activity continue to permeate every phase of the great convention.

Dr. R. H. Ferguson of Kitchener was elected to plan the Dental Public Health breakfast program for 1951.

T.R.M.

QUEBEC

The Mount Royal Dental Society

This Society held its official closing dinner of the 1949-1950 season on April 25.

Guest speakers were Dr. Armand Fortier, Governor of the College of Dental Surgeons of the Province of Quebec, and Dr. Ken Carver, Governor of the Canadian Dental Association.

Their topic was "The Role of the Dental Hygienist in Dentistry." They discussed the education, licensing and duties of the dental hygienist, as well as presenting authoritative data on the experience some states in the U.S.A. have had. This information endorsed unequivocally the role of the dental hygienist as an auxiliary to the dental office.

The outgoing executive headed by the president, Dr. G. Zimmerman, was thanked for arranging an interesting and busy season of lectures and clinics.

A new slate of officers was elected and installed. Officers elected for 1950-1951 are as follows:

President	Dr. I. Druckman
Vice-President	Dr. B. Bernfeld
Secretary	Dr. D. T. Shizgal
Treasurer	Dr. M. Star
Assist. Secretary	Dr. R. M. Wiener
Members of the Executive —	Dr. L. J. Rosen,
	Dr. A. W. Bazerman, Dr. P. J. Gitnick, Dr.
	J. S. Gruman, Dr. S. Silver.
	J. RAUCH

The Montreal Endodontia Society

The April 27 meeting of this society was held in the Dental Lecture Hall of the Université de Montréal, with the president, Dr. Robichaud in the chair.

Following the presentation of the reports

of the president and the secretary-treasurer, elections were held for the 1950-1951 season with the following slate of officers being elected:

Honorary President	Dr. Ralph Sommer
President	Dr. Louis J. Rosen
Vice-President	Dr. Walter S. Phelps
Sec.-Treas.	Dr. J. P. Lantier
Honorary Members	Dr. D. P. Mowry
	Dr. Ernest Charron

Dr. E. T. Bourke expressed the thanks of the Club to the outgoing executive.

The speaker of the evening, Johnston W. Abraham, M.M., D.D.S., L.D.S., was introduced by Dr. Robichaud.

Dr. Abraham's subject, "Practice Management", was a most opportune paper, since if ever there was a time when dentists should take stock of themselves in the ever changing conditions of life, it is now.

He suggested that we put plans in the place of dreams and transplate aspiration into action. This can only be done by a definite combination of business and professional attributes.

It is to be hoped that the day is past when professional men are thought of as easy marks for accounts and dupes for get rich quick schemes. We should, he continued, pride ourselves as being business as well as professional men, and if we don't, the public will have no pity on us no matter what good services we may render.

Dr. Abraham discussed the present phase of dental conditions and tried to anticipate the future to a certain extent and then discussed ways and means of keeping the business angle of our profession in a satisfactory condition in keeping with a successful practice. He also stressed how to manage when one has too many patients, and again when one has too few.

A plea was made for dentists to plan for sufficient leisure time for one's family and other recreation.

Records, both professional and business, involving general records, fee computing and collection of accounts were discussed.

Following an interesting discussion period, Dr. Abraham was thanked by Dr. H. H. Pearson.

The Montreal Dental Club

A regular meeting of this Club was held on April 24. Dr. McCutcheon, the speaker of

the evening, was introduced by the president, Dr. S. A. MacSween. Dr. James McCutcheon, a graduate of McGill University, was appointed full time member of the teaching staff of the Faculty of Dentistry, McGill, upon returning from two years' post graduate studies at the University of Michigan.

Speaking on the "Construction of Full Dentures", Dr. McCutcheon demonstrated the Michigan technique by the use of slides, in detail, as provided for the instruction of dental students.

Before adopting any specific technique, Dr. McCutcheon suggested that it should be practical in your office as well as being suitable for the particular dentist.

Starting with the impression, preliminary upper and lower impressions are made and poured. A final upper compound impression tray is made with palatal "cut-out" and the final impression taken, finishing with a wash. With regard to the lower, an acrylic lower tray is made on the study model after relieving all undercuts, the tray relieved from muscle attachments in the mouth, and a wash taken; this is followed by muscle trimming using the wax technique.

The preparation and development in the mouth of the upper biterim was next demonstrated, using a cubical outline rather than the rounded labial face as usually advocated. This was followed by the technique of the face-bow transfer of the relationship of maxilla to head from patient to articulator, attention being drawn to the method of forming remounting indices in plaster.

A method of determining the correct occlusal vertical dimension was demonstrated following the principles outlined by Dr. J. R. Thompson.

A tentative centric record is now taken and mounted, following which Dr. McCutcheon demonstrated a simple method of applying the Gothic Arch technique, illustrating the armamentarium and the recording and mounting the mandibular cast in centric relation (final) and recording protrusive relation; also the adjusting of the articulator to the findings of centric and protrusive relation records.

A technique of setting the teeth for the dentures was discussed as well as a method of finally determining the plane of orientation on the articulator. This was followed by the try-in.

Next was demonstrated the remounting of

the upper and lower casts on the articulator for a preliminary grind-in by the "split-cast" technique. Attention was drawn to the amount of change in vertical dimension occasioned by precessing procedures, which must be corrected.

The finished dentures were then demonstrated in the mouth and on the articulator to show the balanced articulation, following which, Dr. McCutcheon discussed the three rules of grinding in a case to correct the errors introduced by fabrication procedures.

The speaker was thanked by Dr. A. Donohue.

BRITISH COLUMBIA

Vancouver and District Dental Society

At the final meeting of this society before the summer recess the members heard one of the most popular speakers of the Province, the Rev. William Hills, of Victoria. Travel films were presented by an air travel organization to complete the evenings' entertainment.

The election of officers and members of the Board of Directors resulted in the following slate for the coming year:

President	Dr. Clay Hallman
President-elect	Dr. H. L. Purdy
Sec.-Treas.	Dr. N. H. Scott
Board of Directors	Dr. L. E. Snider
	Dr. G. I. Creasy
	Dr. D. H. Warren

Dr. Roy Ellis, Dean of the Faculty of Dentistry at the University of Toronto, visited Vancouver immediately preceding the convention of the British Columbia Dental Association.

He was entertained by alumni groups before journeying on to Seattle, Victoria and Kamloops. Dr. Ellis was the principle speaker at the convention.

Dr. Jacobson Goes to Univ. of Washington

Dr. Lloyd Jacobson, of New Westminster, a well known clinician in amalgam technique, has accepted a permanent position on the staff of the School of Dentistry, University of Washington, in Seattle, Wash. Dr. Jacobson is the tenth British Columbian to be appointed to the staff of this University, in the Dental Faculty.

Public Relations

In co-operation with the staff of radio station CFJC, at Kamloops, the Public Relations Committee of the British Columbia Dental Association recently presented, over that station, a fifteen minute broadcast, during the convention held there early in May. The Public Relations Committee, with the assistance of the Department of Health and Welfare of the Provincial Government, also arranged a striking window display of Dental Health material, including a continuous film strip, which was placed in the display window of a large departmental store in Kamloops, during the progress of the convention.

Victoria Dental Society

A late spring meeting of this society heard Dr. Pettit of Portland, Oregon, speak on the "Anatomy Function and Surgery of the Temporomandibular Joint."

DENTAL ASSISTANTS

SASKATCHEWAN

Saskatoon Dental Nurses' Society

At the April meeting of this Society Mrs. Marion McComb gave a very interesting clinic on impression trays using tra-base. A clinic was given by Mr. Jerry Hall of Saskatoon Dental Laboratory on procedure in making a complete denture.

Miss Louise Orge read Dr. MacDonnell's report of items of interest to the dental nurse which was discussed at the Dental Council meeting in Regina.

This Society also held an enjoyable social evening on April 24 at the D.V.A. Dental Clinic in the form of a Dutch Auction. Gaily

decorated boxes of lunch were auctioned also, the draw being made on a raffle and the lucky ticket holder was Mr. Newton Mason.

P. HALVORSON

MANITOBA

Winnipeg Dental Nurses' and Assistants' Association

The Annual Meeting of this Association was held on April 10.

Hazel Foster, Ethel Brown and Gladys Somachko conducted a candle light installation service of the new executive for 1950-51.

President	Mary Davidson
Vice-President	Margaret Kitching
Recording Sec.	Ronnie Davis



MISS CHRIS McGEE

President of the Halifax Dental Nurses' and Assistants' Association, is a native of Halifax, and dental assistant to Dr. G. A. Chudleigh.

Corresponding Sec.	Ethel Olson
Treasurer	Florence Jeffrey
Program	Roberta Jopling
Membership	Louise Murchison
Editorial	Alice Merry
Sick and Visiting	Jean Clemen's
Social.....	Marymae Massey
Editorial	F. Jeffrey

QUEBEC

Montreal Dental Nurses' and Assistants' Association

This Association held its monthly meeting at the Mount Royal Hotel on Monday, April 3rd. The President, Miss Margaret Good, introduced the two speakers of the evening, Mrs. H. G. Jack and Mr. M. Boivin.

Mrs. Jack, Provincial English director of the Blood Donor Panel of the Canadian Red Cross, stated that they are now able to collect one thousand donations a week, but with more hospitals signing contracts with the

Red Cross, it is now considered necessary to increase the Blood Donor Panel to twelve hundred donations per week. Following her talk, Mrs. Jack presented a very enlightening film on "The Miracle Fluid," showing the technical end of the blood transfusion service.

Mr. M. Boivin, representative of the Medical and Dental Departments of Bristol Laboratories, spoke on the use of the antibiotics in dentistry, showing how they can facilitate clinical work . . . how they are able to shorten treatment of otherwise baffling conditions. Mr. Boivin stated that the antibiotics should not be used indiscriminately, and only on the advice of your dentist or physician. He also discussed how the laboratories are trying to keep the dentist well informed regarding the latest improvements in the field of antibiotics.

Following the guest speakers, Miss Connie Taylor, D.A., presented a table clinic on "The Handling of Alginate Impression Material."

I. MOORE

NEW BRUNSWICK

Saint John Dental Assistants' Association

A Dental Assistants' Association was formed in Saint John in April when Mrs. Marion Edwards, President of the Canadian Association, was the special guest.

The following officers were elected:

President.....	Mrs. Marjorie A. Nelson
Vice-President	Mrs. A. Steuermann
Secretary	Mrs. T. L. Banks
Treasurer	Mrs. T. Wanamaker

BRITISH COLUMBIA

Vancouver Dental Assistants' Association

Forty-three members attended the April 17 meeting of this Association when Dr. H. Baker gave a very interesting talk on Child Psychology.

It was unanimously decided to send Miss Kay Hoffard of Winnipeg to the Dominion Annual Convention to be held in Toronto in May, as a representative of both the Winnipeg Dental Nurses' and Assistants' Association and the Western Canadian Dental Nurses' and Assistants' Association.

"B.C. Association" pins will be ready for members at the Provincial Convention on May 6 and 7.

The final social meeting on June 15 will take the form of an Informal Gingham Swing.

MILDRED ARMSTRONG

ALBERTA**Edmonton District Dental Nurses' and Assistants' Association**

At the March meeting of this Association the speaker was Mr. Brennan, Credit Manager of a local department store. Mr. Brennan is an authority on collections having worked in the credit field for a good number of years. He gave many useful tips on the handling of outstanding accounts.

At the April meeting final arrangements were made to send Miss Ham to the Convention in Toronto and thanks to the generosity of the Dental Society in Edmonton Mrs. Warrick will be able to go as well. Mrs. Warrick has been an active member of the Association and also has been in charge of the registration.

M. W. LUNDY

DENTAL ASSISTANTS

HELPFUL HINTS AND SUGGESTIONS

(From Missouri State D.A.A. Bulletin) per D. Assistant

- To clean glass saliva ejectors, use a pipe cleaner with a weak solution of muriatic acid and rinse carefully.
- Non-skid applicators are made by notching the end of the applicator before winding the cotton onto it.
- To keep the mercury bottle spotlessly clean, fill it occasionally with hydrochloric acid, let it stand for a little while—then rinse carefully. The acid will completely remove the grey film which forms on the inside of the bottle.
- To clean burs, use a wire suede brush, then scrub thoroughly with soap and water and place in container of cold sterilizing solution.
- To prevent modeling compound from sticking to fingers, rub a bit of vaseline on the fingers and on the teeth too, when taking modeling compound copper band impressions.
- When filling upper anterior teeth, the cotton roll will stay up under the lip better if it is notched to fit under the frenum.
- Cut cotton rolls in parallelograms with two very acute angles instead of rectangles for greater comfort.
- Small sticker labels, neatly typed or printed attached to the bottles, then painted over with clear nail polish will allow cleaning of bottles without injury to labels.
- To get that high polish on models soak them overnight in a saturated solution of castile soap and water, dry thoroughly, rub well with chamois or kleenex.
- To clean hardened amalgam from the serrations of clogged amalgam pluggers, heat the points and dip them in muriatic acid.
- Use low fusing metal, for casts of occluding bite models. Take a snap impression in plaster and pour in low fusing metal. After it cools articulate for setup and set on articulators. This will eliminate the possibility of losing or changing the bite because of the teeth in the stone or plaster occluding models wearing down and will aid in obtaining centric occlusion after the denture is processed.
- File all Porcelain Jackets, dies and models for future use in case of accidents.
- To clean impression trays of the few stubborn bits of compound and plaster, heat a piece of scrap pink base plates wax or bees wax in the tray by passing it through the bunsen burner. As it all softens, wipe it on a kleenex or an old cloth. The tray will be cleaned and polished at the same time.
- A Camel's hair brush, and the compressed air syringe are excellent to clean and dust bur block, the stone block and the tiny inaccessible crevices on the engine arm, especially the wheels.
- Mark Doctor's initials on all impression trays and articulators with a No. 1 round burr. It will act as identification and always insure their return.

BRITISH COMMONWEALTH NEWS

GREAT BRITAIN

British Dental Service Program

Dr. Harold Hillenbrand, Secretary of the American Dental Association, concludes his paper in the May issue of the *N.Y. Journal of Dentistry* as follows:

If dental fees do not adequately compensate the dentist for high quality work, the natural tendency will be to slight the quality of the work. Even in the professions, you can't buy something for nothing. It is foolish to advance the often-heard argument that no professional man will knowingly slight the quality of his work. If all incentive is removed, if intensive and conscientious effort produce no reward than further restrictions on one's income, no human being is likely to respond with his best measure of devotion.

More seriously, however, this governmental effort to restrict professional income has a deeper meaning for the public. The restriction of dental income necessarily means the restriction of the amount of dental service available to the public. With a profession seriously undermined, with the government promising free dental care to all of the people and with a seriously increasing problem in dental health, it simply does not make sense to restrict the output of dental care. Yet that is what the British program is doing at the moment.

The dental costs have mushroomed to two and one-half times their original estimate. Dental services for 1949-1950, it is estimated, will cost about 31 million pounds.

One of the other great weaknesses in the British program is the intervention of lay personnel in professional matters where trained opinion is essential in the interests of the health of the patient. This intervention is flagrantly obvious in the device known as the Dental Estimates Board.

Under the Act, a dentist is permitted to proceed with certain limited types of dental work. If his diagnosis entails services beyond these limited ones, he must complete the necessary blanks and submit them to the Dental Estimates Board. This Board has handled (to May, 1949) 6,324,000 estimates which pour in at the rate of about 10,000 per day. The Board has seven dentists, not all of whom are engaged full time. The Board also has some 700 clerks and it is obvious that the power

to grant or withhold approval on a professional diagnosis rests with these lay persons. Under this arrangement, there can be no assurance whatever that the final decision will not be dictated by political or fiscal standards rather than by professional opinion.

Health Services Shoddy

Dr. J. Ross-Mansell, registrar of the Institute of Optical Science, declared on March 30, according to the *Glasgow Bulletin*, that never in 25 years of intimate relationship with the health services had he seen such shoddy incompetent, careless and indifferent service, medically, dentally and ophthalmically as that given under the National Health Service. He said this was not a health service but a utility service and that opticians were being compelled to give their patients frames and lenses which before the Health Act they would not have dared to show; that they were compelled to work to standards which before the Act they would never have given a second thought.

INDIA

Medical System

"A large segment of medical opinion in India is determined that Ayurveda, the 3,000-year old Hindu system that is said to be the basis of much modern medicine, and Unani, the more recent but still ancient Arabic method introduced into India by Moslem conquerors, shall not be pushed out of the picture by modern Western practice. Some authorities propose a 'synthesis' of the three to produce a system that will utilize whatever is good and scientific in all of them, thus, they say, enriching medicine in general. The two indigenous systems are naturopathic in character, employing herbs and powdered gems in medicines. But Ayurveda, for instance, also anticipated Pasteur in the development of immunizing vaccines, and has long employed anaesthesia and surgery.

"It is estimated that 90 per cent of India's more than 330,000,000 population use Ayurveda and Unani today, rather than so-called modern medicine, for there are about 200,000 practitioners of the ancient systems doing business against fewer than 50,000 Western-trained physicians. Adherents of Ayurveda and Unani are by no means confined to the peasant or ignorant classes, either. The All-

India National Medical Conference, meeting in New Delhi this week, asked the Government to grant the Ayurvedic and Unani systems the same official recognition that is given

to Western medicine, and to include three-year courses in Ayurveda and Unani in the curricula of Indian medical schools."—*New York Times*, February 27, 1950.

GENERAL NEWS

National Research Council Associate Committee on Dental Research Holds Annual Meeting

The eleventh meeting of the Associate Committee on Dental Research was held in Ottawa at the National Research Building, 2-3 March, 1950. This was the annual meeting for the consideration of 1949-50 reports from grantees and the award of grants for the year 1950-51. Dr. Roy G. Ellis, Chairman of the Committee, presided and Dr. C. J. Mackenzie, president of the National Research Council was an interested participant.

A booklet entitled "Trends in Caries Research," prepared by Dr. J. S. Bagnall, dean of dentistry, Dalhousie University, was laid on the table. The Committee had arranged for the publication of this brochure, and has since, through the kind co-operation of the Canadian Dental Association, mailed copies to all dentists in Canada. A more comprehensive bibliography and digest of the literature on caries, also prepared by Dr. Bagnall, is being published in a limited edition by the Committee for distribution as a reference work to libraries of dental schools.

This project on caries research was only one of thirty subjects on which research is being supported by the Committee. Nine of the thirty projects have been completed. One of the subjects on which a final report was presented dealt with the assessment of local anaesthetics for small nerve-block. Considerable work is also in progress on various aspects of the problem of fluorine in its relation to teeth.

A study of the relining of dentures grew out of an earlier investigation of the means for preventing distortion of dentures during repairs. In the course of the work it was found that there were, in fact, two problems. One of these, the repair of fractures and the replacement of teeth has been dealt with successfully; the findings were published recently in the *Journal* of the Canadian Dental Association. The second problem concerned the preventing of distortion in lower dentures on relining. This problem is still under study.

Experimental work has shown that a successful relining method can be realized. The work is approaching completion.

Renewals of twelve grants-in-aid amounting in all to \$18,460 were recommended for 1950-51, and, in addition, five new grants, totalling \$9,110 were awarded. For the coming year, therefore, the Committee will be sponsoring seventeen research projects, having a combined value of \$27,570.

Following is a list of the new projects:—

- | | | |
|-------|--|---------|
| DR 31 | Mr. G. J. Miller and
Dr. L. B. Jaques | |
| | "An investigation of nerve-block"..... | \$1,870 |
| DR 32 | Dr. A. W. Ham | |
| | "Investigation of the effect of adrenal cortical hormone imbalances on various connective tissue structures of the growing incisor teeth of animals" | 900 |
| DR 33 | Dr. H. A. Hunter | |
| | "A study of the calcifying potential of calcium oleate on the dental pulp" | 1,500 |
| DR 34 | Dr. A. D'Iorio | |
| | "Studies of calcium metabolism in tooth with the aid of Ca ⁴⁵ " | 2,840 |
| DR 35 | Dr. J. B. MacDonald | |
| | "Experimental fusospirochetal infection with mixtures of pure cultures" | 2,000 |

The Committee noted with regret that no applications had been received for the Fellowships offered for graduate research in dental science, despite the fact that the subject had been brought to the attention of all dental schools, and had been discussed freely by various groups. Members of the Committee expressed the opinion that most postgraduate workers who were qualified to apply for Fellowships had probably found more remunerative employment, and that there would continue to be a dearth of applications unless a higher compensation could be offered.

The next meeting of the Committee will be held in October.

April 1950.

Defence Dental Association of Canada *Second Annual Meeting*

The second annual meeting of the Defence Dental Association of Canada was held in Ottawa, September 23 and 24, 1949. Colonel L. V. Janes of Hamilton presided over the two day meeting attended by delegates from each province.

New Brunswick—

Col. John Edgecombe, Major S. K. Donald
Nova Scotia Major G. K. MacIntosh
Quebec Major John Chamard
Ontario.....Lt. Col. C. L. Strachan, Lt. Col. G. L.

Frawley, Major R. C. McLaughlin
Manitoba—

Lt. Col. John Abra, Major W. G. Campbell
Saskatchewan—

Lt. Col. J. P. Whyte, Major H. S. Locke
Alberta Lt. Col. W. E. Addinell
British Columbia—

Lt. Col. Fraser Allen, Lt. Col. F. A. Smith

The following members were elected the Executive Committee for the year 1950:

Honorary President Brig. F. M. Lott
Hon. 1st Vice-Pres.....Col. G. L. Cameron
Hon. 2nd Vice-Pres.....Col. W. G. Trelford
Past President Col. L. V. Janes
President Col. D. S. Coons
1st Vice-Pres.....Col. J. Edgecombe
2nd Vice-Pres.....Col. J. P. Whyte
3rd Vice-Pres.....Col. L. Kent
Secretary-Treasurer.....Major H. C. Thompson

The third annual meeting will be held this year in Winnipeg, Man., September 22 and 23 at the Fort Garry Hotel.

Medical Society Dues

The Chicago Medical Society dues are now \$60.00 a year. Membership in the Chicago Medical Society automatically carries membership in the Illinois State Medical Society and the American Medical Association. The Journal of the American Medical Association is subscribed for independently (\$12.00 a year) on the basis of becoming a Fellow of the American Medical Association or by direct subscription.

F.T.C. Orders Members of The American Dental Trade Association To Terminate Price-Fixing Conspiracy

A blanket order directing the American Dental Trade Association, six of its officers and 143 manufacturers and distributors to terminate a conspiracy to fix prices and otherwise

eliminate competition in the manufacture and distribution of dental equipment and supplies was issued in March by the Federal Trade Commission. The companies named in the order distribute more than 75 per cent of all dental goods used in the United States.

Social Security For Dentists in the U.S.A.

Considerable pressure is being built up among dentists in the larger cities to try to force the American Dental Association's House of Delegates to reverse its stand against inclusion of the dental profession in the government's social security program . . . That pressure is particularly strong in the East where, it was disclosed by the Department of Commerce survey, average dentist incomes are the lowest in the country (New England, lowest; Middle East, next lowest.)—*Dental Surveyor*.

Health Service Bill

Winning some support among opponents of the Administration's compulsory insurance program is a health service bill introduced by the Senate's only dentist member, Lester C. Hunt of Wyoming, who is doing considerable speaking at medical and dental meetings urging his fellow professionals to at least offer something positive as a substitute for compulsory insurance . . . Senator Hunt's bill would offer special inducements to dentists and physicians to practice in rural and other shortage areas; government insurance would be sold, not given, to families with total annual incomes not exceeding \$5,000 (others would have to stick to private insurance) and the insured patient would have to pay the first \$5 of any medical expense.—*Dental Surveyor*.

University of Illinois 1950-51 Telephone Symposia

In this telephone series five different phases of dentistry will be discussed. They are as follows: Modern Concepts of Drug Therapy; Periodontia; Clinical and Physical Appraisal of Dental Materials; Preventive Dentistry, and Oral Medicine. Enrollment of dental societies and study clubs is still being accepted. The minimum fee for group enrollment is \$250.00.

National Health Day

Health will be recognized officially this year by the Canadian National Exhibition which has announced that Tuesday, September 5 will

be known as National Health Day as well as International Day. This is the first time in its long and colourful history that the world's premier permanent fair—which this year runs from August 25 to September 9 inclusive—has officially devoted one of its days to the subject of health.

Cancer Course For Dentists

by MAUDE SPENCE HOLWAY, D.D.S.,
Seattle, Washington

"The mouth is a sensitive recorder of general health," stated one speaker at the Cancer Refresher Course for dentists, in Seattle. The three day lecture course was held in March in the new Health Sciences Building of the University of Washington.

Ninety dentists were enrolled, some of whom were Canadians. Dr. L. Jacobson, Dr. John Sproule, and Dr. Alexander, of British Columbia were enthusiastic participants.

The fourteen eminent cancer authorities slanted their lectures for dentists, so that each dentist present was given practical, helpful information that could be used in his own practice.

The importance of recognizing precancerous lesions was stressed. The cold sore that doesn't heal, the persistent cracked sun burned lip, intolerance to smoking, swelling or pain of unknown origin, all could be potential malignant lesions and should be viewed with suspicion.

Dr. Frank Wanamaker, professor of major oral surgery, University of Washington, stated, "If we are to reduce the high death rate due to cancer, we must recognize pre malignant lesions." He urged that patients with such lesions should be referred for diagnosis and possibly biopsy. The patient should be emphatically warned against neglect or procrastination. An early diagnosis often means saving a life.

Dr. Ernest M. Jones, dean of the School of Dentistry, outlined the purpose of the course, while Dr. Wendell Wylie summarized the information given by the lecturers, and stated that a similar course would be given next year.

Hypnotism in Dentistry

The use of hypnotism in the practice of dentistry was rejected as impractical in an editorial in *The Journal of the A.D.A.*

While pointing out that few members of the healing professions question the value of

direct suggestion in ministering to patients, it added:

"There is some question, however, in the minds of many regarding the desirability of extending this art to the point of hypnotic suggestion."

"Certainly at the present time and with our extremely limited knowledge of the subject, hypnotism has no practical application in dentistry. Dentists can serve their patients best by developing the art of direct suggestion and by improving their skill in the administration of approved anaesthetics."

Penicillin Dentifrice

A new dentifrice containing penicillin gives promise of substantially reducing tooth decay, it is reported by Dr. H. A. Zander, of Tufts College Dental School, Boston, in *The Journal of the A.D.A.*

Dr. Zander said that a two-year experiment had revealed that a group of school children who used a tooth powder containing penicillin were found to have an average of 54 per cent less tooth decay than a similar group of children who used a neutral dentifrice.

Dr. Zander, who is professor of oral pediatrics at Tufts Dental School, based his report on a two-year research study of 352 children between 6 and 14 years of age in two elementary schools in Walpole, Mass.

In a separate comment, The A.D.A. Council on Dental Therapeutics, which evaluates dental products, urged that additional tests of the safety of the penicillin dentifrice be made before the product is offered for over-the-counter sale to the public.

Pointing out that it is not yet definitely known whether daily use of penicillin in a dentifrice will produce a resistance to the drug, the Council report stated:

"The predominant position of penicillin as an anti-infective agent in modern therapeutic practice suggests that every reasonable precaution be observed in an attempt to avoid conditions which might deny the benefit of penicillin to critically ill patients."

HAWAII

Health Services

"The Honorable Oren E. Long, Secretary of the Territory, in an address to the Hospital Association of Hawaii at its 9th annual meet-

ing, gave the group a clear picture of what the informed community-minded citizen expects from health programs. Said Mr. Long, 'The layman has a right to demand maximum cooperation among all professional groups interested in the health and social welfare of our community. Every citizen has a right to demand complete cooperation between government health agencies and private health organizations. He has a right to demand that his dollar, whether paid through taxation or

through charitable contributions, be used to the best advantage. Private and public agencies have no right to isolate themselves from each other, nor have they a right to duplicate services, personnel and equipment, if savings in these areas can be made. There is no place for rivalry or competition except as the quality of a program in one agency may stimulate other agencies to more effective operation."—Oahu Health Council Bulletin 4:2 Nov.-Dec., 1949, per Public Health Economics.

IN MEMORIAM

Thomas Cowling of Toronto, Ontario, died suddenly at his home on April 16 at the age of 62.

Dr. Cowling was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1912. He immediately joined the teaching staff of the College and continued his connection until his death.

A record of and a tribute to the work of Dr. Cowling appears in an editorial in this issue.

Dr. Cowling was unmarried and survived by two sisters.

Charles William Lennox died on April 12 at Bracebridge, Ontario.

Dr. Lennox was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1891. He was an honorary member of the College since 1941.

He is survived by one daughter in Detroit and a sister.

W. H. Beckwith of Bridgetown, Nova Scotia, aged 75, died April 7. He was graduated from the University of Pennsylvania in 1901 and practised in Halifax for 45 years.

Over a long period he was Professor of Operative Dentistry at Dalhousie. He was also a past president of the Provincial Dental Board and the Nova Scotia Dental Society.

He had been a choir member of Saint Paul's Anglican Church for many years and had also served as vestryman. In his younger days Dr. Beckwith had been one of the leaders in promoting musical productions and on different occasions had been cast in leading roles in operettas. He was a member of the Board of the Community Concert Association.

He was a member of the Halifax Golf and Country Club, the Maritime Senior Golfers' Association, and the Halifax Curling Club. He was also an honoured member of the Masonic Lodge.

Dr. Beckwith is survived by his widow and by four children by his earlier marriage.

John W. Dobson of Halifax, Nova Scotia, aged 44, died suddenly April 16. He was graduated from the Faculty of Dentistry, Dalhousie University in 1917.

He maintained a private practice until 1948 when he joined the university as the full-time Professor of Operative Dentistry. He was a past president of the Nova Scotia Dental Society and a member of the Dental Public Health Committee. He was also a member of the Halifax Commercial Club and of St. Andrew's United Church. At one time he sang in the choir of that church.

He was active in tennis, badminton and golf, and some years ago was a member of the Dalhousie and Wanderers rugby team.

Dr. Dobson is survived by his widow, one daughter, two sons and three sisters.

Harold Farrar Mitchell of Vancouver, B.C., aged 58, died April 10 following a prolonged illness. He was graduated from the University of Oregon Dental College in 1917 and commenced practice in Vancouver.

He was a member of the Delta Sigma Dental Fraternity. He was prominent in church and yachting activities. He was also a member of St. John's Shaughnessy Men's Service Club and the Royal Vancouver Yacht Club.

Dr. Mitchell is survived by his widow, three sons, a sister and one grandchild.

Contribution à l'étude des dysmorphoses du maxillaire supérieur et de l'étage moyen de la face, consécutives à la mésio-position de la dent de six ans. Leur thérapeutique par distallation.

par P. ROUSSEAU et R. G. GUDIN, Loches, France

Les dysmorphoses consécutives à la mésio-position de la dent de 6 ans supérieure sont fréquentes et très souvent négligées. Il a fallu récemment les travaux d'Izard, de Coster, Cauhépé, Korkaus, Maronneaud, pour mettre en évidence l'importance de cette question; tout en remarquant que la plupart de ces auteurs n'attribuent à ce mouvement en avant que des malpositions antérieures et de légères malformations palatines.

Nous nous permettons d'avoir une opinion différente et de pressentir avec de Coster, l'importance de la dent de 6 ans supérieure, en rapport avec son rythme d'évolution et de sa position dans la formation du crâne facial de l'adulte.

I Mécanisme de formation de la dysmorphose

La dysmorphose peut être de cause génétique par dysharmonie d'évolution dento-faciale, en fonction des nombreux facteurs pathologiques ou de prédestinations constitutionnelles, qui agissent sur le squelette en formation; ou de cause acquise quand, par une manoeuvre intempestive, telle l'extraction d'une des deux molaires caduques ou une carie de ces dents, la molaire de 6 ans perd le

contact prématurément pour venir combler l'espace devenu libre. Les raisons de cette migration mésiale sont trop connues pour que nous ayions à y insister. Quoi qu'il en soit, dans la mésialisation, nous avons rupture des forces d'équilibre par déplacement de la poutre molaire de Bluntchli et du levier de mastication; leur influence est considérable dans la formation de la face, comme l'a montré cet auteur.

D'après Brash, cité par de Coster, "ce serait l'activité fonctionnelle du procès alvéolaire qui serait à la base du développement des os de la mâchoire et du sinus". Nous sommes d'accord avec ces auteurs et il nous paraît que la rétraction de "l'arc alvéolaire" dans la mésiogression de la lèvre molaire supérieure installe la dysmorphose dans l'étage moyen de la face.

II Modification de l'arc alvéolaire supérieur par mésio-position

La dysmorphose la plus caractéristique est une prognathie totale du maxillaire supérieur par ante-évolution des deux dents de 6 ans. Elle affecte la base apicale de Lundstrom prise dans son sens le plus large.

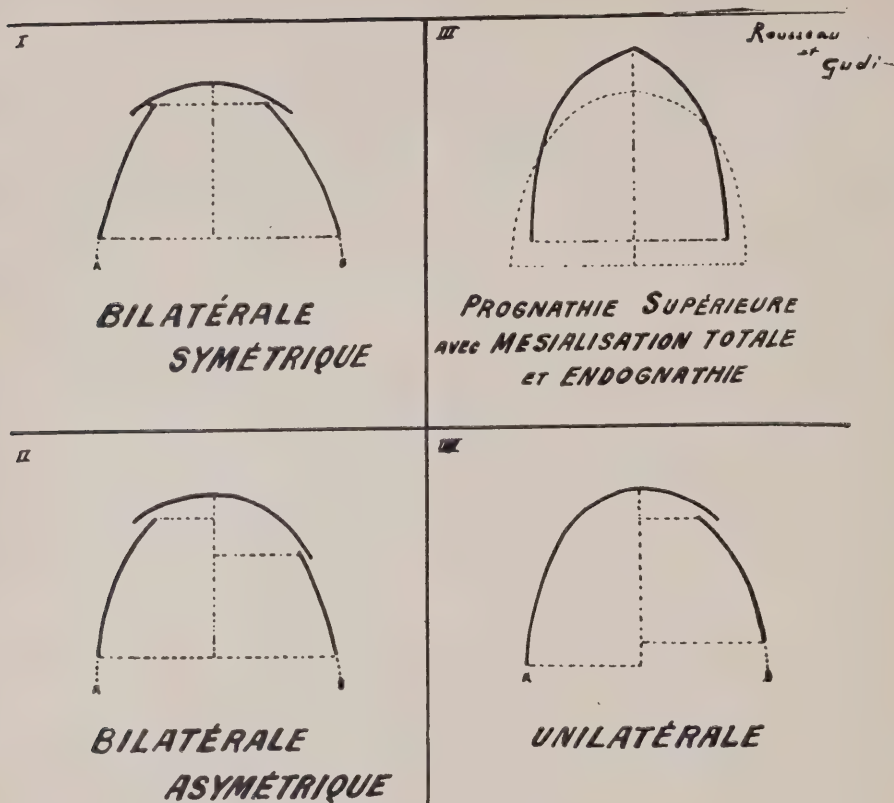


Tableau No 1

III Essai de classification des dystopies dentaires consécutives à la mesio-position de la dent de 6 ans

En rapport avec ces considérations, il devient intéressant de classer les irrégularités de position les plus courantes.

IV Diagnostic des dysmorphoses par méso-position de la dent de 6 ans

Bien souvent, quand la méso-position est unilatérale, l'examen des modèles suffit. Toutefois, pour faire un diagnostic plus précis, il devient nécessaire de recourir à des méthodes plus générales.

Nous devons éliminer la méthode d'Angle. Cette méthode encore trop souvent utilisée, s'appuie sur l'articulation inter-dentaire, et néglige l'indispensable, les rapports entre la base et les dents. Ainsi, avec ce procédé, une malformation très caractéristique telle que la

prognathie bi-maxillaire, a une articulation inter-dentaire normale.

La méthode de Simon se sert du plan orbito-canin. Ce plan est trop antérieur pour bien juger le placement des 6/6.

Le plan de Szygmondy, par contre, est un plan zygo-maxillaire certainement très bon, mais s'il est visible sur l'os sec ou une radiographie parfaite, la méthode reste toujours difficile.

Plan orbito-malaire

Aussi avons-nous envisagé et utilisé un plan personnel orbito-malaire, qui se confond dans le plan sagittal avec le plan zygo-maxillaire de Szygmondy et le "key-ridge." Nous l'avons choisi en partant du point orbitaire postérieur se dirigeant vers la base de l'apophyse pyramidale du maxillaire supérieur. Ce plan est visible à la téléradiographie de profil.

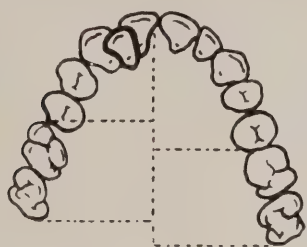
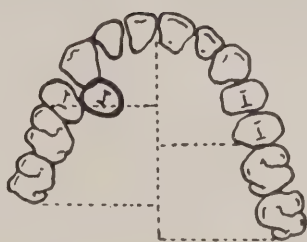
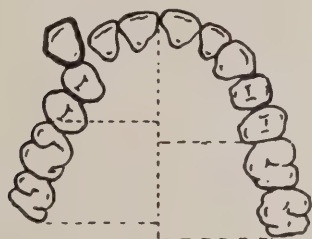
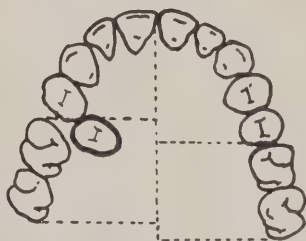
**MALPOSITION de 2****MALPOSITION de 4****MALPOSITION de 3****MALPOSITION de 5**

Tableau No 2

Pour les types à caractère européen, ce plan, comme celui de Szygmondy, semble passer;

à 7 ans, à la face antérieure de la dent à 6 ans.

à 20 ans, à la face postérieure de cette dent.

V Thérapeutique

La thérapeutique rationnelle des malformations et des dystopies dentaires qui les accompagnent, est la distalisation des groupes alvéolo-dentaires en position mésiale. Ultérieurement, l'adaptation fonctionnelle du système ostéo-musculaire interviendra naturellement pour modifier la base osseuse et rétablir l'équilibre facial.

Motivée par les difficultés de distalisation tardive, l'extraction fut malheureusement longtemps la thérapeutique la plus

employée; puis vinrent les appareils ou techniques de Leclerc, Planas, Tacail, de Coster, Beauregard, Brun et Schwarz. Mais nous croyons apporter une utile contribution avec notre distaleur sur plaque amovible.

Nous préférons la plaque amovible parce qu'en dehors de ses possibilités réflexogènes elle a, par ses plans de glissement et les pressions qu'elle exerce, une réelle valeur de réadaptation fonctionnelle.

L'appareil comprend:

1° Une plaque amovible, RESISTANCE STABLE. Elle épouse au maximum les contours des dents, y compris le bloc incisif, à l'exception du bloc molaire à distaler. (fig. 4)

Cette plaque, en cas de nécessité, peut être fendue pour le traitement de l'en-

dogmathie, et nous y plaçons 2 vérins suivant notre méthode (1).

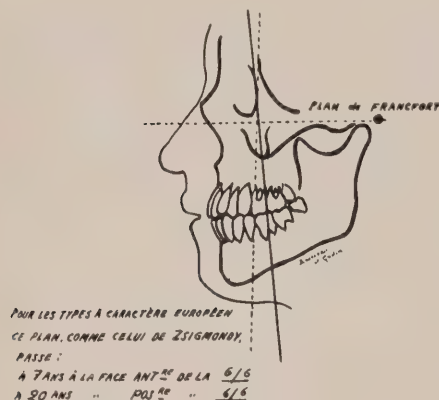


Fig. No 3—Le plan zygo-malaire.

Les moyens de contention sont: les crochets de Jackson, de Schwarz, ou mieux encore, une bague mobile de stabilisation sur la dent de 6 ans du côté stable.

2°- Du côté à distaler: un chariot latéral qui tracte en arrière le bloc molaire (RESISTANCE MOBILE).

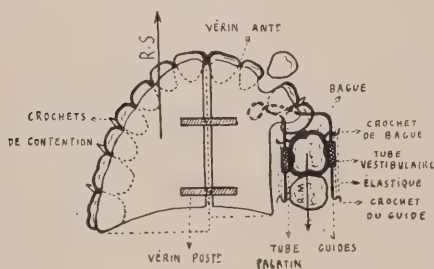


Fig. No 4—Appareil pour distaler les molaires RS>RM.

Ce chariot est composé:

- d'une bague munie de chaque côté d'un tube horizontal et à sa partie antérieure d'un crochet. (fig. 5)
 - de 2 guides fixés à la plaque. (fig. 6)
- Sur chaque guide coulisser le tube

de la bague-chariot. L'extrémité des guides porte un crochet d'appel. La traction du chariot se fait par un élastique à puissance variable. La trajectoire du déplacement est sensiblement parallèle à la courbe de Spy, si l'emplacement des crochets est correctement choisi.

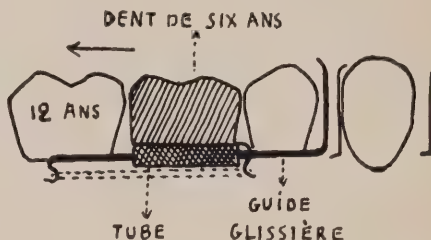


Fig. No 5—Détail du chariot. (Vue de profil)

Mode d'action

Une fois le résultat obtenu, nous immobilisons le bloc molaire distalé en fixant la bague dans la plaque qui sert ainsi d'appareil de contention ou de point de départ pour les actions secondaires d'alignement.

Lorsqu'il s'agit de mettre en place l'incisive latérale ou la canine, nous adaptons à la plaque modifiée un nouveau chariot chargé de tracter les prémolaires en arrière (fig. 7). Autour

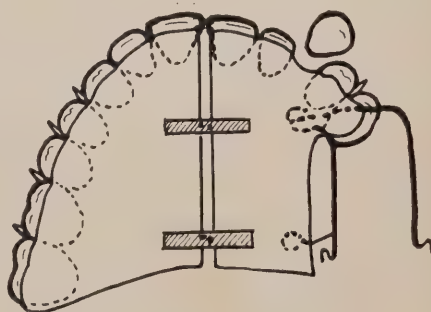


Fig. No 6—Plaque amovible, avec 2 vérins et 2 guides.

(1) "Contribution à la thérapeutique des endognathies du maxillaire supérieur. Description d'un appareillage" par R. G. GUDIN et ROUSSEAU (communication, Société Française d'orthopédie dento-faciale—1948).

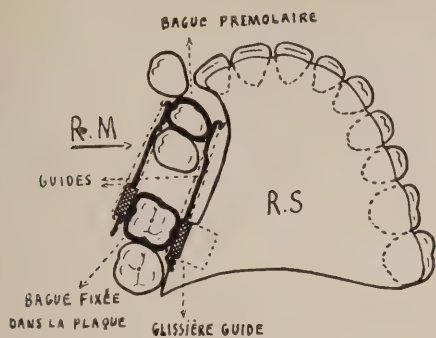


Fig. No 7—Appareil pour distaler les prémolaires.

de la lère prémolaire, passe une bague mobile munie de 2 guides analogues à des antennes. Ces deux guides viendront coulisser librement dans les tubes de la bague molaire rendue solidaire de la plaque R. S. Chaque tube est complété par un crochet d'appel qu'il suffit de relier par des caoutchoucs à la partie antérieure des 2 guides pour obtenir le déplacement du mobile vers la région postérieure. L'espace ainsi obtenu sur l'arcade permet alors l'évolution rationnelle de la canine ou de l'incisive.

VI Observations Cliniques

CAS I Mademoiselle J. . . 14 ans.



Photo. No 2: cas no 1:
Phase intermédiaire.

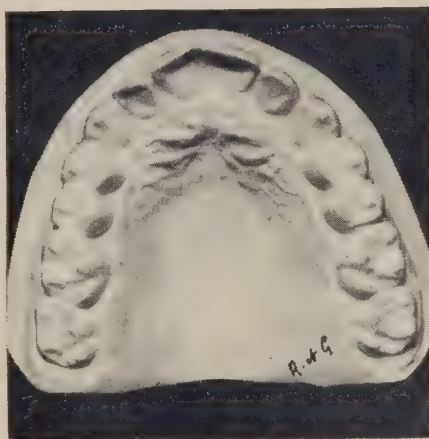


Photo. No 3: cas no 1:
Après traitement.



Photo. No 1: cas no 1:
Avant.

1°- Traitement commencé en avril 1948.

Diagnostic

Légère endognathie asymétrique à prédominance antérieure.

Mésio-position des 6 7.

MALPOSITION PALATINE DE LA 2.

Légère version des 1/1.

2°- Modèle intermédiaire fin décembre 1948.

A noter que nous avons volontairement exagéré la distalisation du bloc molaire.

3°- Traitement terminé en avril 1949.
Appareil de contention et d'alignement.

CAS II Monsieur N . . . 15 ans, 11 mois; type carbo-calcique.

1°- Traitement commencé en décembre 1946.

Diagnostic

Endognathie asymétrique antérieure.
Mésio-position du bloc maxillaire latéral droit.

Postéro-position du bloc incisif droit.

= *MALPOSITION* 3|

2°- Traitement terminé en novembre 1948.

Appareil de contention porté une nuit sur deux.

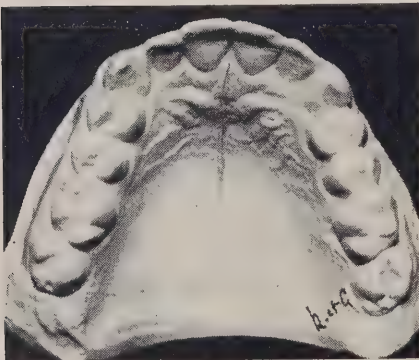
CAS III Mademoiselle L . . . 13 ans
type phospho-calcique-longiligne.



*Photo. No 4: cas no 2:
Avant.*



*Photo. No 5: cas no 2:
Phase intermédiaire.*



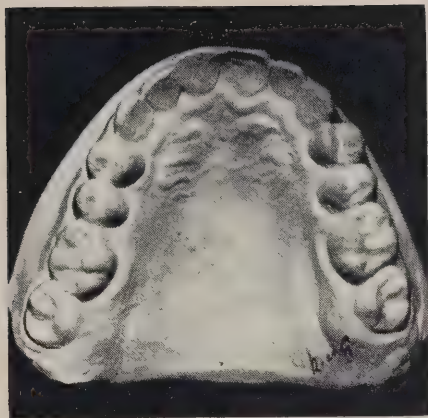
*Photo. No 6: cas no 2:
Après traitement.*



*Photo. No 7: cas no 3:
Avant.*



*Photo. No 8: cas no 3:
Phase intermédiaire.*



*Photo. No 9: cas no 3:
Après traitement.*

1° Traitement commencé à 12 ans, en janvier 1948.

Enfant particulièrement difficile, qui n'a porté son appareil régulièrement que depuis octobre 1948.

Diagnostic

Légère endognathie asymétrique à prédominance antérieure.

Mésio-gression des blocs molaires 7-6 |
MALPOSITION PALATINE DES 4 5 |

(beaucoup plus accusée de la 5)

2°- Modèle de fin de distalisation en décembre 1948.

la 5 peut se placer.

la 4 s'est presque placée seule.

3°- Fin de traitement en mars 1949.

L'enfant porte son appareil de contention et d'alignement.

CONCLUSIONS

Avec cette technique, le pronostic des dysmorphoses qui accompagnent les malpositions dentaires est amélioré. Le traitement peut être conduit d'une manière rationnelle. Ainsi, dans une endognathie compliquée de mésio-position totale, si l'examen radiographique confirme le diagnostic, la distalisation menée parallèlement avec la dilatation du maxillaire nous permet d'obtenir un excellent résultat. L'équilibre des forces réalisé, la contention devient par la suite inutile, sinon réduite.

Cinquantenaire de la Fédération Dentaire Internationale et

XXIVèmes Journées Dentaires de Paris

Du 23 au 30 Juillet 1950, auront lieu à la Faculté de Médecine de Paris, le Cinquantenaire de la Fédération Dentaire Internationale et les XXIVèmes Journées Dentaires de Paris.

Première grande manifestation internationale, qui aura lieu à Paris, depuis la guerre, sous le haut patronage de M. le Président de la République Française, la présidence effective de M. le Ministre de la Santé Publique et de la Population et la présidence d'honneur de MM. les Ministres de l'Education Nationale et des Affaires Etrangères.

Les confrères français font appel à tous leurs amis étrangers pour les prier de venir participer à leurs travaux à cette occasion.

Des festivités importantes ont été prévues et dès maintenant l'American Express a été chargé des réservations de places pour les hôtels ainsi que des facilités de transport.

Le programme scientifique en voie d'élaboration sera communiqué ultérieurement, mais dès maintenant tous renseignements seront donnés en écrivant à M. René R. RIGOLET, Secrétaire général, 45 rue de la Tour d'Auvergne—Paris—IXe.

Couronnes métalliques avec incrustation vestibulaire d'acrylique (technique simplifiée)*

par MAURICE BOUYSSOU, Dr. Méd. Stom. et HENRI CADENAT, Toulouse, France.

Il existe plusieurs procédés pour améliorer l'esthétique des couronnes métalliques, lorsqu'elles doivent être placées sur des dents accessibles à la vue. Depuis la couronne fenêtrée simple ou incrustée de ciment au silicate, sont apparus tour à tour: la couronne avec facette de porcelaine incluse, les "masques" en céramique, les couronnes à logette vestibulaire contreplaquée intérieurement et garnie de résine acrylique.

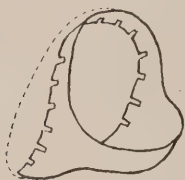


FIG. 1

A ces procédés déjà connus, nous pensons que l'on peut ajouter aujourd'hui une technique plus simple, qui, si elle n'a pas la prétention de réaliser la perfection au point de vue esthétique, présente cependant l'avantage d'une grande commodité, et aussi la possibilité de conserver la vitalité pulpaire, car le perte de substance dentaire est réduite au minimum.

On construit la couronne de la manière habituelle, en s'attachant seulement à bien engager le rebord du métal d'un millimètre au moins dans le sillon gingival du côté vestibulaire (buccal) et à accuser sur cette face la convexité de la bague métallique.

La couronne étant terminée, on découpe une "fenêtre" correspondant à toute

la face vestibulaire, mais en y conservant un "collier" métallique cervical large d'un millimètre et demi.

Le métal est ensuite encoché sur les bords de la fenêtre, de manière à former des "créneaux" ou indentations que l'on écarte légèrement, les uns en dedans, les autres en dehors, pour assurer une rétention suffisante à la matière plastique (fig. 1).

La maquette en cire vestibulaire est disposée de manière à empiéter sur les bords de la fenêtre, tant à l'intérieur qu'à l'extérieur de ces bords. Elle doit en outre recouvrir complètement le collier métallique cervical.

Lorsque la résine est venue s'y substituer, (fig. 2 et 3), elle adhère intimement aux bords du métal et ne peut plus s'en détacher. La recherche des teintes et l'exécution du dégradé se fait par la technique habituelle. Il est parfois nécessaire de retoucher légèrement le moignon coronaire du côté vestibulaire pour compenser le faible épaississement dû à la résine et obtenir la mise en place définitive; c'est là une modification très simple à exécuter et qui ne peut compromettre

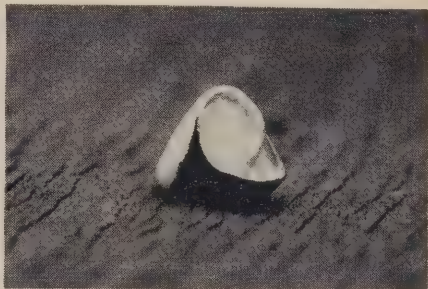


FIG. 2

*Travail de la Clinique Odonto-Stomatologique de la Faculté de Médecine de Toulouse, France (Prof. E. Cadenat).



FIG. 3

l'exactitude de l'ajustage, ni la solidité de l'ensemble.

Comme nous l'a suggéré notre excellent prothésiste M. SERET, il est préférable de construire ces couronnes en métal très résistant (ors spéciaux) tant pour la bague que pour la partie coulée; elles pourront ainsi, comme nous l'avons déjà vérifié, être utilisées comme éléments de bridge.

Enfin, pour répondre à certaines objections, remarquons que l'effort de la mastication s'exerce uniquement sur la partie métallique, et que l'usure progressive de la couche d'acrylique par le brossage ne constitue plus un problème, depuis l'apparition des résines polymérisables à froid (Athermoplast V 10, Hesacryl, etc.).

Les égards dus aux jeunes

Combien de jeunes confrères n'ont-ils pas été désemparés du vide fait devant eux par la profession déjà en position? Il y a là une grave responsabilité, très grave quand on connaît l'esprit si volontiers matérialiste des générations montantes. Il est vrai que l'encombrement des professions explique dans une certaine mesure cette tendance à ne penser qu'au fait brutal de la position à conquérir, même en jouant des coudes et des poings, si c'est nécessaire. Cette explication ne résout pas le problème; elle l'excuse en partie, car elle ne nous fait pas comprendre pourquoi il y a un tel manque de curiosité scientifique et aussi peu de goût pour le beau métier. Il y a de nobles exceptions qui sont l'espoir de la profession et nous nous réjouissons que la relève soit tout de même assurée.

Les faits sont là, n'en discutons plus, mais voyons comment nous pouvons minimiser les dégâts et faire acte de véritable confraternité. De nos jours, un jeune confrère qui se lance en pratique personnelle est devant un inconnu lourd de risques. Il a souvent des études, une

installation, une mise en ménage à amortir. Les soucis sont grands, car on ne peut savoir comment cela tournera. Nous avons des exemples où tous les pronostics étaient extrêmement favorables et où cela fut un échec complet pendant les premières années. Cela ne tenait pas ni à la personnalité, ni aux capacités du praticien, car il y avait des besoins réels dans ces localités. Il y a souvent des impondérables qui font grincer l'engrenage de la mise en marche. Bref, le jeune confrère se lance dans l'inconnu et il a besoin de bienveillance. Il doit sentir de la sympathie dans ceux dont la position est assise. Cela lui donnera du courage et il aura toujours de la reconnaissance pour ceux dont l'accueil aura été aimable. On voit si souvent des confrères ulcérés tout au long de leur vie par un accueil froid ou malveillant de leurs aînés.

Du reste, pourquoi faire grise mine à un nouveau confrère? Pourquoi avoir peur d'une nouvelle installation? Nous connaissons un confrère, vous en connaissez peut-être d'autres de cette espèce, qui se tuent au travail, qui prolongent

leurs journées pour ne pas engager un assistant qui pourrait s'établir plus tard dans la même localité. Quel bénéfice en a-t-il? Surmenage et usure précoce. S'il a tant de travail, c'est que certainement il y a place pour un second. Il n'est pas certain que l'assistant s'établisse et si cela arrive, il est préférable que ce soit quelqu'un qu'on connaît que le premier inconnu venu.

Que ce soit dans le cas de la grande ville ou de la petite localité, croyez-vous que votre attitude soit la plus intelligente? La liberté d'établissement existe. Vous n'y changerez rien. Votre clientèle ne vous appartient jamais en propre. Seuls, la qualité de votre travail et votre entente vous la conserveront. La froideur vis-à-vis du nouveau venu ne retiendra pas un patient dans les mailles de votre filet. Cette arrivée est comme un coup du sort contre lequel il est inutile de regimber. Allons, soyez beaux joueurs,

Messieurs, et accueillez le nouveau avec un sourire aimable! Donnez-lui même ces conseils si précieux dans la clientèle de petite ville. Offrez lui votre aide dans les cas difficiles où votre expérience pourrait se révéler utile. Nouez des rapports d'amitié avec sa famille et vous préviendrez une foule de malentendus, de crève-cœurs tout en préparant au jeune praticien une entrée dans la vie professionnelle qui soit dépourvue d'amertume et pleine d'encouragements.

Vous n'y sacrifierez pas un patient. Lui n'en gagnera pas un seul et les rouages seront bien huilés pour une coexistence agréable. Il y a assez de tracas dans la vie actuelle pour ajouter ceux qui peuvent être si facilement changés en apports positifs.

C'est un vœu que nous formons spécialement pour cette époque de l'année, où une nouvelle génération sort de nos universités.

Bonsack

Revue Mensuelle Suisse d'Odontologie,
Tome 58, 1948, No 1.





PAGES EDITORIALES

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Rapport annuel du rédacteur*

Ce m'est un honneur et un plaisir, en tant que rédacteur de la Section française du Journal de l'Association Dentaire Canadienne, de soumettre le rapport traditionnel au Bureau des Gouverneurs de l'Association Dentaire Canadienne.

Au cours de la dernière année, nous avons eu la satisfaction de recevoir une collaboration des plus précieuses de la part de nos confrères, qui ont voulu faire bénéficier la profession de leurs études sur des sujets propres à l'intéresser.

Cette collaboration a été la plus abondante qu'il nous ait été donné de recevoir, depuis que vous nous avez confié la direction de cette section du Journal.

Une autre constatation heureuse, que nous tenons à signaler, est l'intérêt de plus en plus grand que suscite notre Journal dans les pays de langue française d'Europe. Les commentaires, que nous recevons de France, de Belgique et de Suisse sont à l'honneur de notre publication. Nous recevons de plus en plus fréquemment, de ces confrères étrangers, des articles originaux, que nous insérons de temps à autre dans notre section.

Cette collaboration étrangère et la participation plus active des confrères de langue française du pays à la vie du Journal rendent plus angoissant le problème d'espace pour notre section. Il nous est impossible de publier toutes les nouvelles générales de l'Association et de relater des faits d'intérêt local pour nos confrères. Nous sommes forcés de toujours remettre à plus

*présenté à la réunion annuelle du Bureau des Gouverneurs de l'A.D.C., à Toronto, le 11 mai 1950.

tard la publication de ces items et différer la parution de ces articles veut dire les ignorer.

Il nous faut donc plus d'espace et l'urgence devient de plus en plus aigue.

Une question que nous aimerions entendre discuter par les Gouverneurs est l'opportunité pour les rédacteurs de recevoir du Comité Exécutif des suggestions pour les sujets des Editoriaux.

Le Journal est l'organe officiel de notre Association et se doit d'exposer aux membres la politique de l'Association sur les problèmes de l'heure de notre profession.

Il y a une foule de sujets sur lesquels les dentistes canadiens n'ont pas des idées bien nettes et il appartient à l'Association de les éclairer, en leur fournissant des arguments sains et des notions précises sur les questions, qui les préoccupent.

Il me paraît souhaitable que le Comité Exécutif demande de temps à autre aux rédacteurs de traiter telle ou telle question en particulier pour former l'état d'esprit de la profession dentaire canadienne. Le Comité Exécutif reçoit des rapports bien approfondis et bien mûris de tous les comités, qui étudient différentes questions. Les membres de l'Association ont le droit d'exiger la connaissance de ces études et le moyen le plus rationnel de passer ces renseignements aux dentistes "de la rue" est d'en faire des commentaires dans le Journal, sous forme d'éditoriaux.

Le vrai journalisme ne consiste pas à publier les nouvelles, à mesure que les événements se produisent, mais à analyser et à commenter ces nouvelles pour former les opinions des lecteurs.

Avant de clore ce rapport, nous manquerions à la justice, si nous ne mentionnions pas le beau travail accompli par le Comité des Publications, au cours de cette année. Grâce à leurs efforts, le Journal paraît plus tôt dans le mois et ainsi rend un plus grand service à la profession, en lui annonçant les nouvelles plus tôt.

Je tiens aussi à remercier le gérant d'affaires du Journal, le docteur Gullett, pour son dévouement inlassable et le rédacteur de la section anglaise, le docteur Garvin, pour sa collaboration et son expérience de plus précieuses.

Respectueusement soumis.

Gérard de Montigny.

BOUTADE

La fraise à la main, il soigne une jeune Sud-Américaine, qui ne parle que l'espagnol. La mère de la patiente sourit placidement sur un canapé. Le dentiste sait trois mots d'allemand, trois d'anglais. Désirant être aimable, il s'enquiert s'il fait mal: "Tut das weh?". Pas de réponse. "Does it hurt?". Rien. Se tournant vers la mère, et cherchant ce qui en espagnol peut ressembler à faire mal, il tente: "Dolorosa?" . . . Le sourire de la mère se fend jusqu'aux oreilles, et, charmée, elle répond: "Non, Flora!".

Médecine et Hygiène, 1er mars 1950.



Copyright by Harold White Studio, Winnipeg

RED RIVER FLOOD

The above is a picture of the home of Dr. Ivan Jackson of Winnipeg, Manitoba, during the height of the flood of the Red River in May, 1950. The water was $7\frac{1}{2}$ feet deep at the front of his home with a very swift current. A few blocks away the water was 16 to 18 feet deep reaching the second floors of the homes in that locality. Some thirty or more dentists were seriously affected by this flood.

This is the worst flood in the Red River Valley and Greater Winnipeg in over a century. Thousands are homeless and destitute, but everything humanly possibly is being done to alleviate this distress, and the dentists of Manitoba have responded nobly to the calls made upon them.





Dr. S. A. MacSWEEN
Montreal, Quebec

President of the Montreal Dental Club.

Graduate of McGill, 1920.

Demonstrator, Faculty of Dentistry, McGill, 1920-1923.

Member American Association of Endodontists.

Past President of the Montreal Endodontia Society.



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, JULY, 1950

No. 7

CONVOCATION ADDRESS*

by DR. JOHN W. CLAY, Calgary, Alberta.

IN THE COURSE of a lifetime there are moments when one is deeply moved by an unexpected turn of events. For me, the present is such an occasion.

The receiving of the honorary degree of Doctor of Laws, from the University of Alberta is a great honour and distinction. It marks a high moment in my life and brings an added sense of responsibility towards an Institution with which I am proud to have had some small association for a number of years. During that association, I have come to know something of the problems of one Faculty. I have watched, with interest, the University's growth and its ever increasing influence on the life of this Province and far beyond its borders.

To you, Eminent Chancellor, and the Senate of the University, I offer my thanks with due humility. I realize that it is not for myself, primarily, that this honour is given. I stand here as the representative of a profession whose rapid progress is being recognized, through me, at this Convocation. On behalf of my colleagues, I assure you of their appreciation of this commendation of dentistry.

The privilege of receiving this degree in company with Doctor L. C. Charlesworth, whose great contribution to the development of Alberta is so well known, adds to the distinction accorded to us.

May I record also my pleasure at the conferring of the Honorary Degree, by the University, upon the Honourable Ernest Gruening and upon The President of this University, Dr. Robert Newton. Through the years of his presidency, Dr. Newton's wisdom and helpful attitude towards the Faculty of Dentistry have been greatly appreciated.

As you know, the University of Alberta was established, in Edmonton, in 1908. I believe there have been some slight comments in Calgary, from time to time, on the wisdom of those in high places who chose Edmonton for its location. There were none, however, who doubted the wisdom of developing a centre of learning in the new province as soon as buildings could be erected and staff assembled.

From a small beginning, there has grown a great university, of which all Alberta is proud. In the arid south half of the province, there is, however, the hope that in due time the headgates will be opened, so that a growing stream of education and knowledge may irrigate a thirsty land.

The University has grown under wise and able leadership and while time does not allow for much comment, I feel that, on this particular day mention must be made of the new pathological building; the hospital extension and the new library where students of

*Presented at Convocation Exercises at the University of Alberta held in Edmonton, May 17, 1950.

all faculties will mingle, and gain a broader concept of education. There is also the noteworthy effort of the students and alumni in bringing to completion the fine Students' Union Building which will contribute so much to the life of the University.

My theme is Education—not in the limited sense of training for a life work but with the broader meaning of preparation for a good way of life. I feel keenly that the larger outlook is essential for all of you who leave the University today.

I think that Sir Richard Livingstone, in his book—"Some Tasks for Education", states clearly the aim and purpose of your teachers in the various faculties which you represent, by saying: "The True Faith is that education should send you out into life knowing thoroughly something which is itself first-rate; knowing how to learn and interested in the world".

It is possibly a little disquieting that of all the graduating groups here today, Divinity should be the smallest. In the only field where the prime purpose is the development of the spiritual side of man's nature, there is only one degree to be given.

In all the other faculties there are record classes, which I am happy to note, include a large number of veterans.

While my acquaintance with Law, until today, has consisted mostly of friendship with members of that profession, I am suddenly impressed with the importance of the legal profession in the life of the nation.

Of the graduates of the Faculty of Engineering one need say little, as the great impact of the work of their profession on our lives is evident on every hand.

The School of Pharmacy is unexcelled in Canada and its active research program is to be highly commended.

The Faculty of Education is represented by many graduates who will take up the very important work of

laying well the foundation of our national life for the years to come.

And Dentistry — Inasmuch as my privilege of addressing you this afternoon, arises from the importance to dentistry in the growth of dental education in Canada, may I speak at somewhat greater length of this, my own profession?

In 1875, Dr. J. B. Willmott of Toronto, having realized the need of training, called on men of like mind and so began the first teaching of dentistry in Canada. To Dr. Willmott goes the honour and distinction of organizing what was known as the Royal College of Dental Surgeons of Ontario and of being the first and for many years the leading dental teacher in Canada. In later years the School became the Faculty of Dentistry of the University of Toronto.

There are now Faculties of Dentistry in four English speaking universities—Dalhousie, McGill, Toronto and Alberta and one French Canadian school at the University of Montreal which compares favourably in teaching and facilities with any on this continent.

Dental teaching began in this University in 1918. By 1927 a complete course had been established and in that year, seven graduates of the Department were given the Certificate of Qualification to practise.

In this brief history one cannot speak too highly of the work of Dr. H. E. Bulyea, in this University, who retired as Director of the School of Dentistry in 1942. The marvel is that with poor equipment, he and his staff, through inspired personal effort, managed to graduate an increasing number of young men who today are a credit to their profession.

During the past eight years the Faculty of Dentistry, under the very able leadership of Dean Hamilton, has grown in size and increased in efficiency so that it now ranks high among the dental teaching groups. Earnest, capable men are giving service so that Dentistry may do its important work for the welfare of the community.

While the complicated tools, with which men now work, are only useful in relation to their ability to use them, one must mention the great improvement in space and equipment which has been provided in the last few years. Not so long ago the school facilities were inadequate. A great part of the responsibility rested with the Dental Association of the Province, which well knew this, but failed to take an active interest in bringing this condition to the attention of the governing body. Later, when the need was shown to the President and Board of Governors, by the Association, more space was given and equipment installed for a splendid clinic Unit which would be a credit to any University.

I am also not unmindful of the future. Behind the University stands the Provincial Government, with many calls on the public funds which it disburses. Having in mind the fact that the rapidly expanding needs of the School, to meet the growth of dentistry, will necessitate a continued increase in staff, space and equipment, and that it is always wise to praise Governments—from whom all financial blessings flow, I give our praise. Even without this motive, Sir, I feel it is very just and right to do so.

The fact that there is no other dental instruction in Canada, west of Toronto, places a great responsibility on this University. This is the only school in nearly 3,000 miles and the only one in the four western provinces.

Dentistry is changing rapidly from the almost hopeless treatment of the most prevalent diseases of man, to a search for their prevention. Like the quest for the causes of cancer, there is still no answer but a growing number of the pieces of the picture are in our hands. More research facilities are needed and I have the hope that Alberta will shortly make some contribution in this essential field of study. I am confident that one day the problem will be solved.

In the meantime there is a larger public awareness that dental health is

necessary to general good health and that dental service should be made available to all. A great increase in training facilities must be provided throughout Canada or there will still be a lack of service for the greater part of the population.

My closing remarks are to all of you who today leave the University as its graduates. I believe it is safe to say that never in the history of this University has a finer group of young men and women assembled for graduation. It is gratifying to note the large number of those who have earned and receive today, special awards and advanced degrees.

The youth of Canada has been tried and tested by the strains and stresses of the last few years and you who entered the University, did so with a background of matured thought and widened interests on which to superimpose a special training.

Today you are about to set out on the adventure of your new life. You will go to many places both near and far and you will have an equally wide diversity of occupations and interests.

This day marks the fruition of your years of study, self-discipline and self-denial. It is a moment of accomplishment—the end and the beginning of major periods of your lives.

Recently I examined, with interest, a large coloured drawing in the president's office, dated 1912. It showed the campus and the buildings of the University as they were to be in the years to come. The reality is very different from the plan which was made at that time.

You, also, see your future before you of a certain pattern. One thing is sure. It will not develop as you expect, but, like the University it will grow as your changing lives and circumstances require—not of itself—but by plan and intelligent effort.

I have no doubt you had misgivings when you entered your courses a few years ago. For those of you who were married and asked your wives to make the sacrifice with you, it was a doubly

difficult decision. I am sure that as you thought over the long hard way ahead and looked to the future with some feelings of uncertainty, you may have had somewhat the feeling of old Weller of "Pickwick Papers" as expressed to his son Samuel on the occasion of his approaching marriage—"When you are a married man Samivel, you'll understand a good many things as you don't understand now; but vether it's worth-while goin' through so much to learn so little—is a matter o' taste."

Ralph Barton Perry, an American educationalist, has said — "A liberal education is a preparation for the vocation of life and not merely a livelihood." At this moment I am sure your early doubts and wonderings are gone and you realize that these years of effort have not only opened the doors of opportunity, but have also made possible a larger, fuller life.

I think also of the parents of many of you, who have patiently waited and aided in the background and of how they, too, must have a vicarious feeling of achievement and happiness.

There comes to my mind a thought of the Italian philosopher, Benedetto Croce — "Man can only know that which he has experienced." Is not that truth the basis of, and the reason for, the training which this University has given so well to those of you who are graduating, whether it be in Divinity, Pharmacy, Law, Dentistry or any one of the various branches of education and engineering represented here to-day?

You have been given experience in the special type of work you have chosen, have now been honoured by your University and have been granted

the privilege of commencing your life work.

With this technical training you have received education in its more correct sense—not only from reading and lectures but from association with your teachers and fellow students in the life of the University. It is as though you have had a blood transfusion which has introduced new thoughts, new wisdom, new abilities and a better understanding of life.

With education, however, there are obligations which are more important than the special skills which as students you have acquired. Whether you go to the small community or the large city, opportunities for leadership exist on every hand.

I speak to men and women, many of whom have already given a great service to their country and to all of us. Indeed, without your sacrifice and that of many others, the freedom and importance of this occasion would have been lost. Still today, our chosen way of life is in as great danger as it was in the years of war. If it is to survive, it will only be by the right thinking and effort of us all—but especially of the young men and women whose greater advantages impose greater public responsibilities.

As the hidden future unfolds, real satisfaction will come, not so much from material gains but from the growth within yourselves of those things of greater value which have been nourished and enlarged by your association with this, your University.

I wish each of you success in the field you have chosen, and above all, I wish you all a good and useful life.

To remind a man of the good turns you have done him is very much like a reproach.—Demosthenes

In our complex society, a professional man must be able to relate his practice to the political, economic, social and moral milieu in which his clients or patients live.

Dr. Sidney Smith

Pres. Univ. of Toronto

FULL DENTURES USING NATURAL ANTERIOR TEETH

by Dr. V. M. LLOYD, Edmonton, Alberta

A PLEASING and natural appearance is perhaps the primary goal in full and partial denture construction. The patient will usually make an honest effort to master the use of his dentures if he feels that his appearance has been unchanged or improved. We must realize the value of aesthetics, as the successful use of dentures depends more on the patient's ability to persevere and accustom himself to the appliances, than on the precision of their construction.

We should use every means at our disposal for maintaining or duplicating nature when this is desirable. Photographs, profile x-rays, measurements of vertical dimensions, impressions of natural dentitions, and many other aids are used in recording natural appearances. The manufacturers of artificial teeth and denture bases have made wonderful improvements to help us.

In certain cases, nature has provided us with a working material to retain natural appearance, which may have been long overlooked. We mean by this the use of the patient's own natural anterior teeth in constructing dentures.

The following points should be observed if this technique is to be carried out:—

- (a) Anterior teeth that are strong, well formed and of a pleasing appearance are recommended. Very thin, transparent teeth are not suitable as breakage is too much of a hazard. Colour retention is also difficult to maintain.
- (b) The arrangement of the teeth can be duplicated, or changed in the set-up if desired.
- (c) Teeth with small silicate or gold restorations can be satisfactorily used as long as the enamel shell is sufficiently intact.
- (d) Teeth which are very badly stained are not recommended unless a duplication of these stains is desired. The markings and colours are reproduced in the finished denture.

We must satisfy ourselves at this point that the maximum of aesthetics will be gained by using the patient's anterior natural teeth on the denture. The following procedure is then carried out:—

- (1) A complete roentgen examination is made of the anterior teeth and supporting tissues to determine the size, length and inclination of the roots.
- (2) Full upper and lower impressions of the teeth and arches are taken with a colloid or similar material

Fig. 1—Original photograph of patient before dental treatment.





Fig. 2—Patient wearing immediate dentures, with duplicated plastic anterior teeth.

Fig. 3—Patient wearing final dentures with natural anterior teeth.



so that accurate models may be obtained of the dentition.

- (3) An accurate record is made of the shades of the gingival half and incisal half of each anterior tooth. The mould of the teeth is also taken.

The choice of constructing immediate dentures or not is decided in each case. The technique advocated is to remove all posterior teeth and allow the gums in these areas to heal. Upper and lower impressions are then taken and dentures constructed with the anterior teeth reproduced in plastic. This duplication of the anterior teeth is very important in order that there be a minimum change from the natural state. The anterior teeth are removed and these temporary dentures immediately inserted.

The patient's natural anterior teeth are kept in a preserving solution while the patient's anterior gums are healing. This usually takes a month or more.

The crowns of the natural teeth are then cut from the roots and all the dentine reamed out, leaving the thin, enamel shells. Undercuts are made in the mesial and distal surfaces of the shells for retention. New impressions for the permanent dentures are taken and these anterior shells and plastic posterior teeth are tried in for aesthetics. The arrangement of the natural teeth is reproduced from the original models and x-rays. If modifications are desired they can be made at this time to obtain the best aesthetics.

In curing the dentures the crowns of the natural teeth are first filled with plastic of suitable colours to maintain the natural colours of the originals. This plastic fuses with the denture bases and provides the attachment of the teeth to the dentures during processing.

When the dentures are inserted the anterior teeth will appear whiter than before. After wearing the dentures for a few days the original natural colours of the teeth will return.

The accompanying photographs illus-

trate a patient passing through the three stages. This case was one completed by a prosthetic research group

in Edmonton, Alberta, composed of Dr. Stan Hodgson, Dr. Harold Knight and Dr. Vic Lloyd.

SOME PSYCHOLOGICAL IMPLICATIONS OF DENTAL PRACTICE

by M. STRAKER, M.D. & I. B. HYAMS D.D.S., Montreal, Quebec

WE have re-entered an era of medical investigation, thought and interest which has been dormant for hundreds of years. We refer to the psychosomatic "discovery" which far from being a real discovery, is as old as medicine itself. It will be remembered that the earliest healing efforts were made by priests or medicine men who were regarded as having special powers, and divine sources of aid. Treatment consisted of a mixture of prayer and incantation and various expiatory rituals to cleanse the body of its ills. The conception primarily held was that illness was the result of invasion by various evil agents or spirits. The therapeutic efforts were accordingly logically conceived.

With the dawn of scientific medicine, organic processes as determined by infections, traumatic, neoplastic and degenerative factors became the subject of investigation. So enormous were the strides in the understanding of disease as a result of this type of inquiry that the individual as a contributing factor in the total illness picture was quite forgotten. Older and earlier views were discarded as nonsense, fallacious and superstitious. In more recent years, however, a disturbing fact has made itself more and more evident. In spite of the continuing refinements in the search for and treatment of disease, through the development of x-rays, electrocardiographs, biochemical studies etc., medicine still could not understand or treat with any measure of success a great many people who were apparently ill, yet organically sound. Some doctors,

thoroughly indoctrinated in organic tradition alone, still deny this reality; thus, no organic disease, no illness. The complaints are regarded as being imaginary, or pretended. Yet medical practice contains so many "functional" ailments, that dismissing or denying their existence is not too satisfactory.

This disturbing experience has led to the evolution of "psychosomatic medicine" of the present day. It is being recognized more and more that the patient does not consist of a mass of organs intimately interconnected, yet understandable along mechanistic lines alone—but further, that the individual is a psycho-biological entity, in which the whole organism is more than the sum of its separate parts—also, that disease processes have repercussions on the personality, life and emotional reactions of the patient, and that the personality and emotional life can be a vital factor either in initiating illness or adding a critical load to the existing sickness burden.

Dentistry is a highly developed specialty dealing with one aspect of the organism, an aspect which, on first consideration, may seem very far removed from the patient's life problems. The psychiatrically orientated practitioner, however, cannot fail to be impressed with the frequency that matters of dental interest crop up as emotionally charged experiences in the life of the patient. Therefore the exchange of experience in the respective fields of practice involving this mutual area, may lead to further clarification of some of the problems.

The dental practitioner works in the

field of oralogy. It is necessary to understand at once, that in addition to the physiological functions which are mouth connected, such as sucking, chewing, biting, spitting, swallowing, tasting and salivating, there are psychological values engrafted upon these which can be a determining factor not only in dental treatment procedures, but in the whole life experience of the patient. Freud¹ first, then Abraham and others have discovered and increased our understanding of the importance of oralogy. The mouth is a determining factor in survival after birth, through the ingestion of nourishment — soon it becomes a highly prized, sensually meaningful area through which the developing ego can obtain gratification of other needs as well as food.

THUMBSUCKING

Sucking represents a technique of withdrawing milk from the breast or bottle, but also very early comes to represent at an emotional level, the warmth, the closeness, the protective presence of love in the person of the mother or feeding adult. Thus sucking may arise in answer to a need entirely separate from food hunger. The child who is tired, lonely, frightened or frustrated will suck in an effort to obtain gratification from tension. Thumbsucking cannot be treated sensibly by threats, rewards, ridicule or mechanical restraint. Violent measures at suppression may bring about apparent disappearance of thumbsucking as a habit, but complicates the ego development with possible reappearance of mental pathological symptoms in later life. Breaking the habit is only symptomatic treatment, as if the sedation of an aching tooth requiring pulpectomy or extraction were considered the complete treatment. One's aim should be the correction of the factors that encourage thumbsucking. Arresting the sucking and leaving it at that is partial therapy. Total therapy demands seeking out and alleviating the causes.

Thumbsucking may be construed as

a normal activity if it occurs in children up to 18 month of age². Beyond that, its persistence is a problem in behaviour which may or may not require treatment, depending on a variety of factors. In therapy, primary attention is directed towards the child-parent relationship, and efforts are made in the direction of reducing anxiety and allowing healthy ego development to proceed.

BITING

Chewing and biting functions appear at an age level in the infant when the passivity symbolized by sucking is being replaced by more aggressive behaviour. With the growth of the ego comes the expanding conception of the world about. The child begins to relate its own hungers, tensions and pleasures to the appearance or disappearance of mother, food, light, etc. When frustrated, blind anger or rage arises. Biting comes to express aggression and rage; it also arises as an attempt to devour, in order to retain so it will not be taken away, the breast, the person, or the object from which separation is painful. Thus biting assumes physiological meaning as a technique of grinding food preparatory to swallowing but it also has psychological meanings. Biting as an expression of rage is evident when one child bites another. As a sadistic component of sexuality, it appears when one lover bites another. Biting or chewing at one's lips or mucosal lining, or grinding or gnashing the teeth may give rise to oral or dental lesions. Burstone³ has pointed out that personality problems may be projected to teeth and oral structures.

SALIVATION

Salivation occurs as a problem in either of two forms—ptyalism or excessive dryness. Ptyalism is often a psychological problem, and in conjunction with the insertion of dentures, may signify in addition to its accepted meaning of response to a foreign body that the dentures are rejected psychologically, even though the patient may be consciously un-

aware of this rejection. A return to normal flow accompanies a resignation to the inevitable⁴.

From a physiological standpoint, excessive salivation is closely allied to spitting. Spitting is expressive of the desire to reject or be rid of whatever is objectionable, whether an object or an idea. This may be most clearly seen in a child's behaviour. An object if good in the mouth is chewed and swallowed; if bad, is spit out and rejected. Ptyalism is often seen in early pregnancy, and then may represent an unconscious desire to get rid of the child which is conceived of as an oral incorporation. It may also arise as an expression of rejection or an effort to cleanse the mouth of something objectionable, *e.g.* an unwanted or unacceptable denture. Thus the alleviation of ptyalism incident with denture insertion consists of two stages; primarily the organism accustoming itself to the new article on a physical basis, and secondarily the organism accustoming itself to the new article on a psychological basis, with all its implications.

XEROSTOMIA

Excessive dryness or xerostomia is a common manifestation of anxiety, and results from overaction of the sympathetic nervous system. In addition to the subjective discomfort produced by excessive dryness, it probably is related to "halitosis". Here a vicious cycle is created. An anxious patient with dryness, when excited develops bad breath, of which he is acutely aware, which increases his anxiety, which continues the halitosis, etc. One refers, of course, to halitosis of systemic origin and not of local or dental origin. The rampant caries of xerostomia is evidence of the dental pathological correlation.

Further considerations of interest are studies in which emotional changes are correlated with qualitative and quantitative change in the saliva and the relationship of these salivary changes to dental caries. The place of the emotional factor is alongside the

dietetic, hereditary, congenital and hygienic factors and is of relative importance in aetiological consideration⁷.

EMOTIONAL TENSION

Among other factors which may be held responsible for diabetes mellitus, for example, is emotional tension. The urine of many previously glucose free specimens have been found to contain sugar when samples are taken from students about to write an examination. In the well-advanced cases, insulin secretion has become unavailable for normal sugar metabolism, which influences fat metabolism to the production of the ketone bodies and accompanying this disturbed biochemical picture are the clinical symptoms of diabetes, the thirst, the chronic fatigue and so on. Analogically, it is conceivable that the salivary enzyme fragment instrumental in breaking down the glucose to carbon dioxide and water is deficient or absent and acid formation results. Instead of acting as a neutralizing agent in incipient carious zones, the saliva acts as an enhancing agent in the acidogenic process; or the saliva may become chemically altered in such a way as to encourage invasion of proteolytic organisms into available tooth channels as described by Gottlieb.

Taste disturbances may lead the dentist to careful investigation, but one must be mindful also of the variations in taste which are a reflection of the mood of the patient. To one who is depressed, taste may be flat, absent or bitter. The hysteric may complain of burning, itching or various distortions of taste. The psychotic patient complains of various perversions of taste in accordance with the delusional ideas of being poisoned or having to eat objectionable material, as faeces, semen, etc.

FEAR

Thus far we have been describing symptoms, and symptom formation of psychogenic origin. However another important aspect of dental prac-

tice is the total reaction of the patient to dental procedures and oral surgery. One thinks at once of the patient who is terrified of his dentist and anticipates a visit with anxiety sometimes mounting to panic. Many people neglect their teeth through fear of the anticipated pain. Hence the familiar joke of the toothache disappearing just as the dental office is approached.

To understand the intensity of fear present about oral surgery, one thinks at once of the unconscious values connected with oralogy. Earlier mention has been made about the sensory values of the mouth in early ego development. Actually the earliest sexual organization of the libido involves the mouth, its structures and functions. Persistence into adult life of the sexualized meaning of the mouth is seen in such activities as smoking, gum chewing, kissing, fellatio and cunnilingus. The mouth has enormous value as an avenue for the expression of strong unconscious wishes and impulses which are repressed and do not freely appear at a conscious level. Thus it represents an arena where life instinctual conflicts are given unconscious expression. Surgery and manipulations in this area thus acquire meanings which are not apparent on the surface. Castration anxieties are often symbolized by the loss of teeth. An extraction produces reverberations of anxiety as if it represented a threatened genital mutilation. A great many patients with anxiety hysteria date the onset of their illness to a dental extraction, particularly where a general anaesthetic has been used. Thus unconscious fears and phantasies can add enormously to the load of anxiety which is experienced in the dental chair. Hysterics characteristically describe themselves as "trapped" in such a situation—which parallels their feelings in other situations where their sexual conflicts are activated.

Another fact of importance is that fear intensifies the perception of pain, even if its effect on the pain threshold

is still uncertain. Braceland⁸ has called attention to the relationship of fear, pain and various emotional states. This imposes a twin responsibility on the dental surgeon. He must recognize that pain is not the only personal factor to be dealt with, but fear needs to be allayed as well. Another incidental factor which might be mentioned, depends also on the unconscious sexuality of oralogy. Frankly hysterical patients to whom the dental procedure may symbolize a sexual assault, should never be seen or treated without the presence of a third person, else the charge of seduction by the dentist may create an embarrassing situation.

Related is the problem of the patient who cannot accept dentures and returns with complaints again and again. To some people, dentures represent advancing age, an unwelcome change of appearance, even though aesthetically an improvement, a loss of strength, virility and sexual power. Many jokes refer to this linkage. Dentures may activate latent conflicts and emphasize feelings of inferiority. Here again, loss of teeth is clearly linked to loss of sexuality.

At the opposite extreme is the surgical addict, the patient who insists on dental extractions, or complains of toothache until surgery is carried out by the unwary practitioner. Here the tooth is regarded unconsciously as a sacrifice in a gesture for expiation of guilt which stems from the individual's aggressive or sexual drives. This type of unconscious motivation leads the patient to lose also the appendix, the gall bladder, or any other removable organ which the surgeon removes in a fruitless effort at symptomatic therapy. At work here is the Biblical axiom "If thine eye offend thee, pluck it out". The tooth is sacrificed instead of the eye or the phallus, or some organ more highly valued. A bargain is struck with oneself.

We must remember that in dental practice, the problems are not confined to the patient alone; the dentist in his approach to his work and to the

individual may be at fault. The commonest error is to regard the dental problem as one related only to the teeth and to forget the patient attached to them. The busy practitioner in a measure of self-protection and to diminish his own anxiety, may neglect to consider the pain-inducing factors of dental manipulations. The idea is "It has to hurt; if you looked after your teeth, you wouldn't have large, painful cavities." Here the dentist punishes the patient for creating anxiety in him. The patient's fear is best allayed by a calm, confident manner on the part of the operator, by time taken to reassure the patient about what is going on, by the freer use of local anaesthesia and pain-reducing measures.

The doctor-patient relationship and its ordered use in therapy as an active treatment agent to diminish anxiety, is the most potent therapeutic tool to arise out of psychosomatic studies to date. In addition to the dental problem, constant attention to the patient as an individual who has his anxieties, superstitions and particular attitudes

is necessary, and the reactive modifications of the practitioner's approach to the patient in turn can be a valuable application to dental practice. Many practitioners unconsciously use sound psychological techniques in patient management. Attention to success or failure of these manoeuvres with patients of different types will lead the way to the development of further proficiency in handling problem patients.

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ANNOUNCEMENTS

Maritime Dental Association

The Annual Convention of this Association under the auspices of The Nova Scotia Dental Association, will be held at Digby Pines Hotel, August 30 to September 2, Digby, N.S.

American Dental Association Convention

The 91st annual session of the American Dental Association will be held at Atlantic City, Oct. 30 to Nov. 2.

Official application forms may be found in The Journal of the American Dental Association, beginning with the May issue. Accompanying the application forms are detailed maps indicating the location of each hotel and the rates for each.

Reservations may be obtained by filling out the application blank and mailing it to the A.D.A. Housing Bureau, 16 Central Pier, Atlantic City, N.J. All reservations will be handled by the Bureau. The applicant will receive confirmation of his reservation directly from the hotel.

Great minds have purposes, others have wishes. Little minds are tamed and subdued by misfortune; but great minds rise above them.—Washington Irving.

HANDSOME IS AS ORTHODONTIST DOES*

by ALLAN ANDERSON, Toronto, Ontario

*Reprinted by kind permission from SATURDAY NIGHT.

IN this month of January in Toronto the first public health orthodontic clinic in Canada officially opens its doors. Canada, far behind the U.S. in the attention paid to orthodontics, is now making an effort to catch up. But while, in some areas in the United States, there isn't a town of 10,000 population or more that hasn't an orthodontist, in Ontario for instance there are only 24 and 14 of those are in Toronto. There are only a handful of orthodontists elsewhere in Canada.

"Orthodontics" is just a scientific stand-offish word to most people. Dentists seldom mention it because of the shortage of orthodontists and because dentists, unless they graduated recently, know little about it themselves. Yet it is the most important development in dentistry in the last two decades.

What is it? It's the science of straightening teeth. That sounds rather insignificant but let's look at it for a minute. Orthodontic research (it's going full blast) is establishing techniques of handling a wide variety of troubles affecting teeth. Its emphasis increasingly is on the prevention of problems that later in life can only be ameliorated, not solved. So it looks to the children, at the ages of three and four, even.

Now, a routine dental check of a child's teeth is simply to make sure there are no cavities. There may be no cavities but all sorts of other things may be happening that will cause difficulties and unhappiness later on. Here's what may be happening:

A young child may suck its thumb and the front teeth may be gradually forced out by this action and grow that way.

Through heredity, a child may have protruding teeth. (Orthodontists shudder at the use of the uncomplimentary phrase "buck teeth," just as they pre-

fer to say "teeth appliances" instead of "braces.") The condition may become more unsightly as the child grows up.

A child may have sinus trouble and not be able to breathe properly through his nose. He may be, then, what is called a "mouth breather." Now, the lips help to hold the front teeth in place and if the lips are usually open the action of the tongue may eventually flip the upper teeth out.

Also, acute sinusitis prevents the ordinary growth of the upper jaw. There isn't the usual space for the teeth, so the teeth buckle and some will pop out through the side of the arch from which the teeth grow. This may happen on one side only. Jawbone growth on one side of the face is also held back and the person has a lopsided look when an adult.

CATCH THEM YOUNG

Children may lose their baby teeth prematurely—this is a very important cause of trouble—and some permanent teeth will come in early. This brings on a "malocclusion" where the teeth pattern is upset because some teeth get a head start and squeeze out the others.

Disease, tooth size, more or fewer teeth than usual (the regular number of teeth is 32—when there's any deviation it's usually less rather than more), malformations of the teeth may all mean years in and out of a dentist's chair in later life. If discovered in time the trouble could be fixed up easily in early childhood.

Dentists in fact spend most of their time fixing up teeth after the damage is done. Only in recent years has the research been done that lets them diagnose deviations in teeth pattern at an early stage.

The acknowledged father of orthodontics was an American, Edward Hartley Angle. He had a dynamic per-

sonality, set up an orthodontic school, wrote textbooks and had the orthodontic profession firmly under his thumb all his life. Angle was a marvellous technician. His approach was one of bands and wires. He didn't probe to any extent into causes and he taught that God gave each of us 32 teeth and we should, if at all possible, give them scrupulous care. He tended to ignore the child and emphasized adult treatment.

The American Association of Orthodontics, with members from the United States and Canada, accepted the Angle view of orthodontics. But as early as the 1920's one voice was raised in protest. That man was Dr. George Grieve of Toronto. He claimed categorically that, in certain cases, teeth should be extracted to make room for the rest of the teeth in a jaw that had not developed to full size.

There was so much objection to this point of view that a resolution was presented, but not acted on, to kick Grieve out of the profession. It took 20 years for Grieve to vindicate himself.

In the late 1930's Dr. Charles H. Tweed of Tucson, Arizona, advocated new methods of treatment and was classed with Grieve as a rebel. But times changed. Recently the editor of Angle's textbook, Dr. Robert H. W. Strang, said in his preface:

"Clinical orthodontia has made its advancement almost entirely through the methods of practice and subsequent writing and teaching of two individuals, Charles H. Tweed of Tucson, Arizona, and George Grieve of Toronto, Canada."

Orthodontists are specialist graduate dentists. After graduation they live in residency for a year and a half to two years. They usually write a Master's Degree at that time. Then, in Canada, they have to acquire a specialist's licence from the province in which they live. Also, much more attention is given to orthodontic training in undergraduate dentistry now than was the case even 10 years ago.

There is a postwar boom in ortho-

donitics in Canada. There are part-time or full-time orthodontic departments in each of Canada's five dental schools at the universities of Toronto, McGill, Montreal, Alberta and Dalhousie.

U of T's is by far the largest with a staff of ten. Recently a 29-year-old firebrand from Iowa, Dr. Robert E. Moyers, was appointed Professor of Orthodontics and Head of the Department. Dr. Moyers is pushing research aggressively. He is primarily set on proving to the public, to dentists and to orthodontists that orthodontics can work wonders catching teeth trouble before it gets under way.

COTTON MOUSTACHE

Just how does the orthodontist go about his diagnosis and subsequent treatment? Let's take a few examples.

He may shape a tiny bit of cotton fluff into a moustache and place it under a child's nose. One side of the cotton may move away from the nose as the child breathes. The other side may stay put. Has that side of the child's nose always been blocked? Perhaps. Then x-rays are taken and the blockage tracked down. Cartilage may have to be removed from the nose by a surgeon and the sinus cleared.

All this is done to allow the sinus to work as it should and the upper jaw and the teeth arch to grow normally on both sides of the face.

Suppose a child's teeth have erupted abnormally. One tooth may have come out near the front of the mouth behind the other teeth. The baby teeth may have been lost prematurely and the permanent teeth came through too early and "drifted."

That means that before all the permanent teeth were in (and there is a regular pattern of appearance) the ones in first had moved in the arch towards the front of the mouth as a result of the muscular action of the jaw. This crowded out the later permanent teeth, which, having no other place to appear, were pushed out the side of the arch and came up behind the rampaging earlier permanent teeth.

Now, it would seem logical that the orthodontist would pull the tooth crowding the others, but that's just what he doesn't do. He pulls one of the back teeth, which gives more room in the arch. The rampaging teeth give way and the tooth that had no place to go can now move into its proper spot.

If the tooth out of place had been pulled it would have meant that the dentist was just maintaining the abnormal state in the patient's mouth and there'd be more trouble later.

Some children who haven't sinus trouble, for one reason or another, become mouth breathers. If that's the case, then the orthodontist prescribes a shield which is placed in the child's mouth at night just before bedtime. It doesn't bother the child but it cuts off air through the mouth and the child learns to breathe through his nose. This prevents the development of out-thrust teeth.

Orthodontists stress the importance of keeping the baby teeth until the permanent teeth are due to arrive on the scene. This means decaying baby teeth should be filled or if they do fall out, the dentist can put in a "space maintainer" that holds any spot until time for a permanent tooth to appear.

If permanent teeth appear too early they upset the "eruptive pattern" of the teeth and unless that is maintained a person doesn't have regular teeth in their right places.

Orthodontists much prefer children to adults as patients. Varsity's Dr. Moyers, who sees plenty of patients (fifty a week in the orthodontic clinic operated as part of the University's dental school) says, "I would rather work with 50 children than one cranky 65-year-old whose dentures don't fit. Children are all business in the chair and appreciate what you do for them."

He sometimes gets angry at parents for not realizing their children need orthodontic attention. "If you saw the poor little beat-up children's mouths I see, you'd be angry, too," he declares.

Children, he says, should go to a den-

tist when they are three or four years old, and the dentist should not only look for cavities but any orthodontic work that needs to be done. Dr. Moyers was once called in to look at a two-day-old baby by a father who had been greatly impressed by the improvement in an older son's teeth after orthodontic care.

AND FOR ADULTS TOO

At four years of age, 80 to 85 per cent of the facial growth has been reached, so if a new dental plan has to be worked out for a child it has to be done quickly. At four or five all the permanent teeth in a child's mouth can be seen in an x-ray although they haven't appeared yet.

Of course, orthodontists can help adults, too, but it's usually a case of wires and appliances. Still, this is better than teeth irregularity for life and, although a person might have to go to an orthodontist on and off for half a year, the cost per hour is no more than going to an ordinary dentist.

But the great overwhelming advantage of orthodontic attention is aesthetically improved appearance. A little girl of four may have scarcely noticeable protruding teeth. No one worries about it. But when that girl is eighteen her heart may be breaking because of her unsightly teeth and it's a terrific problem to do anything about the problem then.

The contribution orthodontics can make to mankind is in "a planned permanent dentition," really a new approach in dentistry. So important has orthodontics become that at its last convention the American Association of Dental Schools devoted its main attention to orthodontics.

Admittedly, the new approach in orthodontics is new indeed, but as Dr. Moyers says, "It's too early maybe to expect the public and even the profession to know about the preventive value of orthodontics, but in five years it'll be a different story. People don't have to grow up with irregular teeth but to prevent that we have to catch them young, at best at three or four."

The Forum

CHILDREN'S DENTAL HEALTH DAY

by CLYDE C. SHEPPARD, Berkeley, California.

Condensed from Jour. Cal. State D. Assoc.

The object of Children's Dental Health Day is to impress and inform the public, and the members of our own profession, as to the importance of dental health for the children of this nation. Every American citizen should thoroughly understand that mouth health of the child has a very direct influence, not only on the general health of the child, but on the dental and general health of the resulting adult.

Perhaps the first thing the public (and possibly the dentists) should know and understand, is what is meant by children's dental health. I believe a simple, but sufficient definition is: "that the child's mouth should have a full complement of sound and properly functioning teeth for its particular age, and be free of investing tissue disease."

We must educate the public to the fact that efficient, comfortable chewing is necessary for good nutrition, as well as proper growth and development of the child. The public must also be informed that a healthy mouth is a great safeguard against general bodily disease. It should be common knowledge among the laity that a large percentage of disease is contracted by way of the mouth, and that open cavities and other diseased conditions serve as propagation areas for disease producing bacteria.

I feel it is the duty of every dentist doing general practice to do a reasonable amount of children's dentistry. If he does not feel sufficiently trained in this field of dentistry, he should take

advantage of the many educational facilities available for such training. I feel, however, that little special training is necessary, if one is a reasonably good operator, and can manage children. I feel so much fuss is made about the "psychology" of managing children that a good many operators are literally scared of the children. Let's forget the nonsense, dust off the old fashioned "horse sense" and go to work.

The public should insist that school authorities and teachers be better informed in the subject of dental health, and that reasonable time be devoted to teaching this subject to the pupils.

When we receive children for treatment we must be thorough. We must be sure when each child is dismissed as complete, that all necessary work is thoroughly and properly done.

We must support research; we should even try to sell research.

In conclusion, I wish to review and re-emphasize a few of the points I consider most important.

1. The public must know what dental health is, and must understand its importance.
2. The public must understand the best way to improve the dental health of our people is through good dental health in our children.
3. The public must understand there is not enough dental manpower to do a thorough job by reparative means—therefore prevention is the only answer to an overall solution.
4. The public must realize that although recent research shows signs

- of hope, it is inadequate; and that much more must be done and that it cannot be supported by the dental profession alone.
5. The dental profession must be the source of information and education for the public.
 6. Our profession must put more emphasis on doing more—yet, the very best—children's dentistry.

7. We must be very honest with the public, and not make claims that cannot be substantiated.

Yes, this problem of dental health is tremendous, and the possibility of its accomplishment seems little short of an idealistic dream. I believe, however, a quotation I read in a current magazine is apropos. It is this "that nothing is as practical as an ideal."

REPORT ON CARIES CONTROL STUDIES

by E. TAYLOR DYKES, '17

Condensed from Contact Point, College of Physicians and Surgeons School of Dentistry, San Francisco, Jan. 1950.

If we accept the fact that our caries problem is one in which the use of refined carbohydrates plays a major part, it is shocking to view at close range the tremendous consumption of refined - sugar - containing edibles, among large numbers of children.

Dr. Francis Bull, Director of Dental Health, Wisconsin State Department of Public Health, reported at the recent Convention of the American Dental Association, "770 thousand dollars worth of candy was sold to 66 per cent of the Wisconsin school children last year."

A survey of 23 thousand Oakland school children by questionnaire disclosed the following information:

- 18.8% had candy before 9 a.m.
- 35.1% had candy before 1 p.m.
- 6.1% had soft drinks before 9 a.m.
- 15.3% had soft drinks before 1 p.m.

This represents 54 per cent of the Oakland school children, divided proportionately by high school, junior high and elementary school groups.

Candy, ice cream, pastries and other undesirable carbohydrate foods are sold in school cafeterias and any endeavour to have the practice discontinued too often meets with resistance. At high school functions soft drinks are usually on sale. Established social customs make the latter situation very difficult to handle.

The moral factor involved in teaching the children in the schools the harmful effects of consuming quanti-

ties of refined carbohydrates, and at the same time selling those foods to them for financial profit to the schools, does not seem to enter into consideration. It has been said, "People do not eat the foods they know they should in order to maintain good health, but they use foods the advertisements tell them to eat."

It has been said, "School children are examined each year, the same ailments discovered, notes are sent to parents, and the same children with the same ailments appear again year after year."

An army physician has said that he can examine the elementary school children of any specific age group, and when they reach age 21 he will know approximately the number of rejectees in case of selective service examination.

SPECIFIC RECOMMENDATIONS

1. Dental health education in local health departments, schools, among lay groups and in the dental office.
2. Emphasis upon proper nutrition, including demonstration projects. *E.g.:* In an Oakland school Dr. Hermann Becks is starting a program with 400 school children, kindergarten through third grade. Monthly B. Acidophilus counts will be made and a strong nutritional program instituted. Oakland.

Shriners are financing the program. The Parent Teachers Association and School Administration are cooperating.

3. Enlist the active support of lay groups. They will respond and cooperate with personal effort and finances. When properly educated and enthused they will do a large part of the job for us.
4. Corrective dental care should be made available for indigent children, particularly those of pre-school age. This is the responsibility of the community and should be paid for from tax funds. This conforms to the recommendation of the American Dental Association.

tion. It is not the duty of the dentist to render free dental care.

5. Refresher courses in pedodontics and preventive orthodontics for all general practitioners who serve children. We have in our college, under stellar leadership, refresher courses available to all.

We have the men, the ability and a noble profession through which sound programs in all phases of preventive and corrective dentistry may be implemented upon our child population. If we accept the challenge and carry the message to our respective communities, we will elevate our profession and increase the health and happiness of our children.

DEVELOPMENTAL PROBLEMS OF THE PRIMARY AND EARLY MIXED DENTITIONS

by EDWARD A. CHENEY, D.D.S., M.S., Lansing, Michigan

Excerpt from Jour. of D. for Children, 1st quarter, 1950.

The treatment of anterior crossbites can be carried out in many ways. These will vary in terms of the skill and experience of the individual operator. In

any case the appliance should be simple within the limits of simplicity permitted by the individual situation. In addition, they should be sufficiently



(a)



(b)



(c)

FIGURE 1. Intra-oral and facial photographs illustrating tongue blade technique.

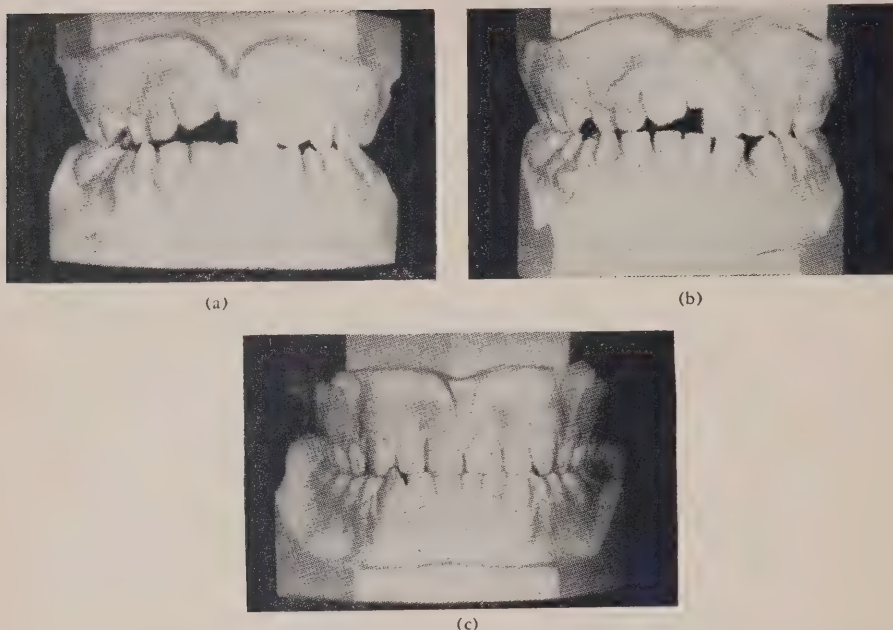


FIGURE 2. Casts taken before (a) after (b) and three years later (c) of a dentition complicated by supernumerary teeth. Only tongue blade and observational procedures were used following the removal of supernumeraries.

flexible to fit the changes and adaptation which take place within the dentition during the process of growing. The tongue blade is the simplest of these devices. It is particularly useful in correcting crossbite relationships of central and lateral incisors. Under ideal conditions bilateral inlockings may be dealt with by means of the tongue blade. Usually, however, this technique is most effective when applied to crossbites involving only one tooth in either arch. Fig. 1.

One successful set of instructions advises the patient to bite hard upon the plane for five counts, relax for three counts, and to engage in this exercise to the extent of fifty contractions and relaxations of the jaws and musculature before each meal and before retiring.

During the exercise the patient should maintain a continuous biting contact with the tongue blade between periods of contraction. A good way to explain this aspect of treatment is to

advise him "never to take his teeth apart."

The casts shown in Figure 2a, 2b, and 2c illustrate how a patient can maintain a very slight amount of overbite with a conscious effort. The growth of this dentition had been upset by the presence of supernumerary incisors. Figure 2a illustrates the occlusion following the removal of the supernumerary teeth. As shown, there were various discrepancies in the position of the incisor teeth. A considerable amount of speculation was given as to the best course of treatment. In the final analysis it was decided to adhere to the concept of guiding growth and to resort to a minimum in treatment procedures. The tongue blade technique was taught to the patient. He returned in ten days with the inlocked left central incisor in the position illustrated by Figure 2b. Only a slight amount of overbite had been obtained. However, by constant effort the tooth was maintained in this position and the relation-

ship soon became a stable one. A cast taken three years later is shown in Figure 2c. Here all incisors and cuspids have erupted into good alignment. The incisor overbite has increased but

slightly and has become fixed in position. Only the tongue blade and observational procedures were used in this case.

DIAMOND BONE FILES VERSUS STEEL BONE FILES

by DAVID L. GRAITCER, D.D.S.

Jour. of Oral Surgery, April 1950

Diamond bone files have a great deal of merit over the conventional steel files. I find that the diamond bone files, because they do not have large jagged teeth, remove bone with very little pressure and the effect is much less consequent trauma. In addition, because the diamond file will remove bone in any direction—in contradistinction to the steel file that removes bone only when drawn against the direction

of the teeth—there is easier access and less tissue laceration. Another advantage of the diamond file that should be mentioned is that it retains its filing efficiency for a very long time. Unlike steel, diamonds do not lose their sharpness through boiling, through frequent usage and through being immersed in the blood medium for a long period of time.



"Freddie has been a good boy and saved up ten box tops so we're letting him come to see you."

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ANNOUNCEMENTS

Annual Convention of The Maritime Dental Associations *under the auspices of*

THE NOVA SCOTIA DENTAL ASSOCIATION

DIGBY PINES HOTEL, AUGUST 30 to SEPTEMBER 2, DIGBY, N.S.

GENERAL CHAIRMAN

Dr. J. P. McGuigan
Birks Bldg., Halifax

PRESIDENT

Dr. G. B. Richmond
Sydney, N.S.

SEC.-TREASURER

Dr. D. G. Pentz
Farquhar Bldg., Halifax

CLINICIANS

Dr. D. Moore	Hamilton	Periodontia
Dr. W. McBride	Detroit	Children's Dentistry
Dr. M. DeVan	Philadelphia	Prosthetics
Dr. S. Bagnall	Halifax	Essayist
Dr. H. Eaton	Halifax	Radiology
Dr. Wm. W. Woodbury	Halifax	Orthodontia
Dr. O. Croft	Halifax	Exodontia

THE ABOVE PROGRAM WILL BE SUPPLEMENTED WITH TEN TABLE
CLINICS ON VARIOUS PHASES OF DENTISTRY

Entertainment will consist of dancing, golfing, swimming etc.

10th Annual Convention Northern Ontario Dental Association

LEGION MEMORIAL HALL, SUDBURY, ONT.

SATURDAY, SEPT. 9, 1950.

A very interesting and educational program has been arranged by the convention committee. The program will include excellent clinicians in Orthodontia and Operative Dentistry.

A tour of the huge nickel industry is scheduled.

Fishing trips to areas that abound with battling, scrappy fish will be arranged and planned for those interested, on writing to the Secretary—Dr. A. R. Kaukinen, 110 Mackey Building, Sudbury, Ont. Canada.

ALL hotel reservations MUST be arranged through the Secretary of the Association.

Eastern Ontario Dental Association Convention

will be held at the Chateau Laurier Hotel at Ottawa, September 17, 18, 19.

Dr. I. F. Calder, Brockville,
President

Dr. E. S. McCartney, Ottawa,
Secretary-Treasurer

"If you look back too much, you will soon be beading that way."

"People in the United States buy more than 9,000,000 magazines every day. Last year about 3,400,000,000 copies of American magazines were sold."



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Editorial

**The Annual Convention of The Canadian Dental Association
and The Ontario Dental Association**

by T. R. MARSHALL, D.D.S., Toronto, Ontario

"The real job for dentistry," said Mr. John Fisher addressing over 1,000 of them at luncheon, "is to eliminate the need for dentists. This, of course, can never happen because as the dentists' viewpoint enlarges, dentistry progresses."

The theme of *prevention* and *conservation*, around which the convention program was conceived, was skilfully built into almost every phase of the great meeting. This is something new in convention planning. Looking back for even a short space of ten years, many will recall that program planners gave a very prominent place to dental surgery and prosthodontia. Attendance would be poor, they said, unless these branches of dentistry were featured and specialists invited to present new methods and techniques. Admittedly, these departments will be important always but is it not encouraging to observe the execution of a program before the largest dental meeting of all time in Canada, where the feature attractions emphasized were not a new concept but an old one not well understood and often spoken of as good in theory but impractical.

To Dr. Charles Williams as convention chairman and those associated with him goes the credit for arranging such a timely program. They are justly worthy of the high praise so aptly expressed by Dean Ernest Charron

of the University of Montreal: "The meeting is wonderful and the organization is perfect."

Here are some of the discussions that attracted capacity audiences—Nutrition Education in Public Health Dentistry by Dr. E. W. McHenry; The Use of Oral Hygiene Procedures in the Control of Dental Caries by Dr. L. S. Fosdick; Practising Prevention by Dr. Hermann Becks and Diagnostic Procedures in Dentistry for Children by Dr. Robert E. Moyers. There were many others, all thought provoking and advancing present day knowledge pointing to a new era of dental practice.

There was much discussion relative to nutrition and caries control. There seemed to be a unanimous agreement that caries incidence had a direct relationship to nutrition and particularly to sugar consumption. Dr. Hermann Becks pointed out that when sugar was removed from the diet lactobacilli disappeared from the mouth in 48 hours. Dr. McHenry said tooth decay has been described as the most prevalent evidence of malnutrition in Canada. "Canadians", he said, "secure one half their energy from carbohydrates and of this one fourth is from sugar, sweet foods and sweet drinks. All of which contribute practically nothing to the diet but calories." Further sweet foods taken shortly before a meal dull the appetite for other foods containing proteins, minerals and vitamins which are essential to an adequate diet. An obvious approach to the elimination of caries then said Dr. McHenry, is a reduction in the intake of sugar. Dr. Fosdick stated that if sugar could be removed from about the teeth immediately after eating, caries should be prevented. He suggested that if the fermentation process, whereby the acid of caries is produced, could be inhibited by an anti-enzyme or antibacterial substance, then caries would be controlled. He expressed the hope that such a substance might soon be available.

In summarizing the impression gained in these discussions, it is evident that dental patients, especially those highly susceptible to caries, can do three things to help themselves. They can curtail their usual consumption of sugar, sweet foods and sweet drinks. They can brush their teeth immediately after food, particularly the morning and evening meal. If brushing is inconvenient at lunch, a mouth wash of plain water would remove food particles and sugar from about the teeth. Finally they can discontinue the in-between meal snacks and sweet drinks. This requires effort and will power and on occasions perhaps is too difficult for a young patient. In such cases raw unsweetened fruit may be eaten without harm. This three point program enlists the cooperation of the patient in personally doing something to prevent the dental diseases in his or her own mouth. It places a definite responsibility on the patient and forestalls the assumption that it is the dentist's fault if the patient has severe caries. However the dentist is remiss if he does not educate and instruct his patient and practise prevention.

Dentistry cannot progress in its campaign for preventing dental diseases without professional and public acceptance of its value. Unfortunately there are still some dentists who do not believe that a preventive program of dental care can be effective and consequently they contribute

apathetically to its promotion. Dental public health workers have been labouring for years, gradually making an impression on the people of Canada and winning more dentists to see and believe in the enlarged horizon of service that can be opened up. They point out that improved dental health on a national scale cannot be achieved through the manner of dental practice we have known because dental cavities are still occurring six times faster than they are being treated.

These dental public health workers are tireless in their efforts because they have a vision and a conviction that the scourge of dental diseases can be minimized through preventive measures.

Never was a group more active. Their educational program began with the first meeting of the convention—a breakfast meeting at eight o'clock which was crowded to capacity to hear Dr. E. W. McHenry—then continued with motion pictures, posters, special luncheon menus and slogans which permeated the activities of the entire convention. The impact of dental public health was never greater.

And in the field of public relations Dr. Harry S. Thomson is still the old master. He and those associated with him did much to publicize the modern approach to better dental health. The people were told in the press but more particularly by radio that if the dentists were to succeed in the prevention and control of dental diseases they must have public co-operation.

The practice of preventive dental care naturally presupposes a philosophy of conservation. It is too much to expect complete eradication of dental diseases in modern society through strictly preventive means. There is still need for good dentistry directed to restoring the teeth and their associated structures to health and function and maintaining them in that condition. Essayists and lecturers presented this trend of thought in their discussions as the following subject titles indicate: Diagnosis and Treatment Planning by members of the Royal Canadian Dental Corps; Conservation of Oral Structures through Operative Procedures by Dr. E. R. Romine; Application of the Rest Position of the Mandible in all Phases of Restorative Dentistry by Dr. John Thompson and The Development and Maintenance of the Health of the Oral Structures by Dr. Hermann Becks. In such a manner was the newer pattern of dental practice presented by many other speakers as well.

The Faculty of Dentistry, University of Toronto celebrating 75 years of dental education in Canada opened its doors to members of the profession attending the Convention. Staff members presented clinics to small groups demonstrating the newer knowledge and teaching in dental science. Conservation through restoration of normal conditions thus prolonging the life and usefulness of the natural teeth in health, comfort, function and good appearance as long as possible was the keynote.

Conventions offer a great service to the dental profession and allied vocations of dental nurses, assistants, technicians and dental trades. Each have programs of their own designed to give leadership in progressive thought and in a realization of common problems, what is being done

about them. Conventions provide opportunity to do a little personal stock-taking and perhaps add a few ideas from suggestions offered here and there. And while the program is primarily scientific there is always provision for sociability, relaxation and enjoyment of entertainment just a little different.

Sometimes too, conventions can be an occasion for doing honour to a worthy colleague. This year Dr. Stephen A. Moore of London, a Past President of both the Ontario and the Canadian Associations was presented with an honorary life membership in our National Association. Dr. G. V. Morton of Toronto, past president of the Ontario Dental Association was elected an honorary life member of this Society, and Dr. George L. Cameron, of Ottawa, was presented with an honorary life membership in the Saskatchewan College of Dental Surgeons. These men have contributed much to dentistry and their recognition with these merited honours will receive universal applause.

Conventions too can present the occasion for reporting on important studies. An illustration of this was the luncheon address of Dr. Harvey W. Reid, Chairman of the Health Insurance Studies Committee. Dr. Reid very capably reviewed dental health insurance schemes presently in operation in Britain, France and Holland and concluded with an explanation of the policy advocated by this association. The Financial Post, Toronto, commented editorially on the address as follows—"There's good sense in what Dr. Reid told the Canadian Dental Association Convention. He warned that any health plan contemplated in Canada must start with the newest generation of youngsters and grow up with them. If it tackles the job at the top end, and tries to work backwards through the older generation of neglected adults any plan will bog down through sheer numbers of patients. Speaking of dental health in particular, Dr. Reid said, 'If the Federal government, through grants to the Province, would make it possible to have a properly trained dental health officer in every health unit in Canada, I believe it would be the greatest step forward ever taken in prevention and control of dental diseases, and the cost would be but a small fraction of the cost of any plan to supply treatment services.' " Dr. Reid's address was a sort of climax to all the scientific sessions in that he suggested an important application for prevention and conservation to the end of better dental health in Canada.

The Canadian Dental Association Convention is now an annual event. It has just had its largest meeting in cooperation with the Ontario Dental Association. About one quarter of the dentists in Canada were in attendance with delegates from points all the way from Newfoundland to British Columbia. The Newfoundland Dental Association was welcomed into membership for the first time. The value of these great meetings is difficult to estimate in terms of personal improvement and stimulation. They are however tremendously important in setting forth a common objective in dental education and service so that the people of Canada may enjoy the best in dental care.

CORTISONE

Cortisone at first known as Compound E was referred to editorially in this journal in February. As well as E, compounds A. B. C. D. and F have been isolated from the adrenal cortex. To make these adrenal hormones available in quantity for experimental work is the problem.

In 1946 cortisone was synthesized. However, to make cortisone in the laboratory requires 30 delicate operations and many months of time.

Cortisone has given spectacular results in the treatment of rheumatoid arthritis. However, certain undesired "hormonal effects" may occur in some patients. These effects have disappeared when treatment was stopped, or when the amount injected was reduced. Many months will be required to determine the exact results. Other diseases which are often fatal have been greatly helped. Encouraging results as yet preliminary have been obtained against acute leukemia, asthma, ulcerative colitis, certain kidney diseases, gout, psoriasis associated with arthritis and Addison's disease. Rewarding effects have been obtained also in serious cases of iritis which have resisted all other forms of treatment.

Merk & Co. reports that while in 1948 only a few grams of cortisone were made available, now in 1950 production has reached the point where it is measured in thousands of grams per month. The cost is still unavoidably great but there is hope when we realize that the initial price for penicillin was \$20 for 100,000 units. Today the price to wholesalers is about 12 cents. Streptomycin was originally priced at \$15 per gram, but this has been reduced to less than 50 cents per gram. Cortisone which was originally \$200 per gram is now selling at \$135 per gram to teaching medical centres.

Today the only known practical method of making cortisone begins with substances obtained from the bile of cattle. It has been estimated that the bile from 40 cattle is required to make sufficient cortisone for only one average dose. However, materials from certain vegetable sources, from wool fat, from various species of plants and other sources are being investigated.

Dr. Kendall of the Mayo Foundation has summarized the problem as follows: "Cortisone is a complex molecule. Its total synthesis is one of the most difficult problems in the field of organic chemistry. But it cannot be excluded as a possibility; in fact, it is perhaps our best hope. It is also possible that something else will be found which can be made easily and which will be just as good as cortisone. Trials of several such compounds have yielded completely negative results. I believe that the chance of finding an abundant substitute for cortisone is not good." M.H.G.

If you will help run our government in the American way, then there will never be any danger of our government running America in the wrong way.—Gen. Omar N. Bradley.

CORRESPONDENCE

Tribute to Dr. Tom Cowling

Dr. J. Menzies Campbell, 14 Buckingham Terrace, Glasgow, W. 2. writes:—

The sudden passing of Tom Cowling inspires me to write a short tribute.

When I joined the 1912 Class at the R.C.D.S., Tom was in the forefront in extending the right hand of fellowship, which has remained inviolate ever since.

Built on generous proportions, fortunately for all with whom he came into contact, his

heart, and outlook on life, were moulded on a similar pattern.

Tom was never a place-seeker, nor one who aimed at reaching the summit by intrigue or innuendo—such tactics were utterly foreign to his fine nature.

It is a fragrant and inspiring memory for me to have been able to count Tom Cowling as my friend. It is always a high privilege to meet such a person, and a still greater one to have known him intimately.

BOOK REVIEWS

Bacterial Infection with Special Reference to Dental Practice by J. L. T. Appleton, B.S., D.D.S., Sc.D., Professor of Bacteriopathology and Dean, The Thomas W. Evans Museum and Dental Institute School of Dentistry, University of Pennsylvania. Fourth Edition, revised, 644 pages with 108 illustrations and 5 plates, 4 in colour. Published by The Macmillan Company of Canada, 70 Bond Street, Toronto. Price \$12.00.

The primary purpose of this book is to aid the reader to form a comprehensive concept of infection, how parasite and host come together and how they interact. The secondary purpose is to point out wherever a knowledge of infection will help the dentist to realize his opportunities and his responsibilities, and to understand and to solve his problems which can only be accomplished by a comprehensive knowledge of infection in general.

Today it is necessary that the dentist has a knowledge equivalent to that possessed by the physician of what infection means if he is to conduct an intelligent and honest practice. This book is a document establishing this point. The dentist and physician must talk the same language and in the field of infections both professions meet on common ground.

The following subjects are dealt with, Bacteria, Viruses, Chemotherapy, Asepsis, Infection and Control, How Bacteria produce Disease, Natural Defenses, Inflammation, Immunity, Streptococcus-Pneumococcus Group, Spirochetes, Dental Caries, Bacteriology of the Dental Pulp, and the Apical-Periapical Region, Periodontal Disease, Focal Infection, Vincent's Infection, Actinomycosis, Osteomyelitis, Oral manifestations of Extra-Oral In-

fections, exclusive of Syphilis and Tuberculosis, Gonococcal Infection, Syphilitic and Tuberculous Infections.

This book is very complete and very practical, and should prove most helpful in the practice of Dentistry. M. H. G.

Practical Periodontia by H. Murray Robb, D.D.S., B.Sc. (Dent.) 117 Pages. Published by University of Toronto Press. Price \$2.75.

This book is a reprint of thirty-seven articles which appeared in Oral Health under the title Practical Periodontia. To this material which has been revised has been added two chapters, one on the Modern Concept of Periodontal Disease and one on Ionization.

The purpose of the book is to bring to the general practitioner an easy-to-read account of Periodontia and to outline the practical applications of the research being done at the University of Toronto by Dr. H. K. Box and, in this, the author has succeeded.

The following subjects are dealt with, Examination, Packing, Scaling, Oxygen Therapy, Ionization, Calculus, Periodontitis, Simplex, Necrotic Periodontitis, Gingivitis, Home Care, Massage, Hypersensitiveness, Food Impaction, Causes of Failure, etc.

This book leans towards the so-called conservative treatment of periodontoclasia rather than the more radical procedure of gingivectomy followed by faithful interdental stimulation. However, it presents in concise and clear terms a recognized treatment of the various periodontal lesions and should prove most helpful to the general practitioner of Dentistry. M. H. G.



PHOTOGRAPH TAKEN AT CONVENTION OF CANADIAN DENTAL ASSOCIATION AND ONTARIO DENTAL ASSOCIATION, TORONTO, ONTARIO, MAY 14-17

Back Row: (left to right) Dr. Harold M. Cline, Vancouver, B.C., Dr. Gustave Ratté, Quebec City, Dr. Stephen A. Moore, London, Ont., Dr. Don W. Gullett, Sec. C.D.A.

Front Row: (left to right) Dr. Charles I. Taggart, Official Representative, A.D.A.; Dr. R. P. Lowery, Vice-President; Dr. G. V. Fisk, President; Dr. E. P. Kavanagh, Newfoundland; Dr. John B. Parfitt, Official Representative, British Dental Association.

ROYAL CANADIAN DENTAL CORPS NEWS

1. Col. E. M. Wansbrough, Director General Dental Services attended The Board of Governors Meeting and with Col. C. B. H. Climo, Deputy Director General Dental Services attended the combined convention of the Canadian and Ontario Dental Association held in Toronto, May 15-16-17.

2. At a luncheon meeting of the Defence Dental Association, held in the Royal York Hotel on Tuesday, May 16, 1950, Dr. S. A. Moore of London, Ontario, presented to Colonel E. M. Wansbrough, D.G.D.S., a trophy for annual competition between the Reserve Force Units of the Royal Canadian Dental Corps.

This trophy will be presented to the unit judged most efficient, on a yearly basis. The trophy is of silver, standing ten inches in height, and is mounted on a five inch ebony base with a diameter of ten inches. The cup is engraved with "The Moore Trophy", surmounted by the R.C.D.C. Crest, and on the reverse side, "Annual Competition; Presented by Honorary Lieutenant-Colonel Stephen A. Moore, Royal Canadian Dental Corps; 1950".

Dr. Moore is Honorary Lieutenant-Colonel of the Corps and a Past President of the

Canadian Dental Association. He was a member of the committee of the C.D.A.; concerned with the reorganization of the Canadian Dental Corps prior to the Second World War. He has always been very keenly interested in the development of the Corps, and his gift will do a great deal to stimulate efficiency.

3. Twelve "A" and twelve "B" Dental Kits were forwarded to the Senior Dental Officer, Winnipeg, for emergency use of the civilian dentists in the flooded areas.

4. Lt-Col. K. M. Baird, Lt-Col. G. B. Shillington and Major B. P. Kearney presented a clinic at the Ontario Dental Association Convention.

5. Major I. A. L. Millar of The RCDC School recently completed a five-day course in Oral Surgery at the Dental Faculty, University of Toronto.

6. Lt-Col. G. B. Shillington of the Directorate, attended a course in Nutrition at the University of Toronto.

7. Col. C. B. H. Climo, Deputy Director General Dental Services has recently been made a Fellow of the International College of Dentists.

NEWS FROM THE PROVINCES

MANITOBA

Report of the Dental Emergency Committee—Manitoba Flood—For some time the Red River had been showing signs of flooding. Rumours and opinions were to be heard on all sides but no one anticipated any worse flooding than in 1948 and things were left pretty much to the municipalities and government. The Red Cross had become active and by May 8 things had worsened to such an extent that they asked Doctor Gordon Fahrni to call a meeting of all health services including medical, nursing, hospital and dental services to organize to meet the emergency. Representing dentistry, this meeting was attended by the President of the Manitoba Dental Association and the President and an executive representative of the Winnipeg Dental Society. After hearing from Doctor Stanbury of the Canadian Red Cross and Mr. Colin Herrle, Chief Disaster Officer of the American Red Cross, a committee was formed consisting of representatives of the various groups to deal with medical, nursing and dental personnel and to organize services for evacuees. An emergency dental service committee was set up immediately to work with this group and a general meeting of the Manitoba Dental Association was held. Owing to the difficulty of communication at the time, the meeting was called by radio announcement and attended by about fifty men who authorized us to carry on with a committee consisting of the members of the Manitoba Board and the Executive of the Dental Society. An emergency dental clinic was set up in the main evacuation centre at the auditorium where we were able to give relief to a number of cases. The furniture for the clinic was kindly loaned to us by the dental supply companies.

The Emergency Committee had already requested twelve dental outfits A & B from the Royal Canadian Dental Corps at Ottawa. This was arranged by Major Cunningham, C.D.C. The possibility—not at all remote—was that electric power would be cut off in which event the city would be zoned, making this imperative, and we breathed much easier when they arrived. In addition, Major Cunningham was able to procure one mobile dental unit for us from the park at MacDonald. This put us in a very strong position in the event of total disaster.

Another dental responsibility was the large number of evacuees placed in the towns outside of Winnipeg. A letter was immediately sent to all members of the Association outside the flooded area asking them to afford emergency dental

treatment to these people gratis and to advise us of the dental situation in their area. We have had wonderful cooperation in this. One of the largest concentrations of evacuees was at the town of Winnipeg Beach where no dentist is located. Again with the cooperation of the Royal Canadian Dental Corps the mobile unit has been sent twice to relieve any dental emergencies.

We have received excellent cooperation from the members of the Dental Nurses' and Assistants' Association who have supplied us with assistance at the Central Clinic and also from several ex-army male chair assistants. The cooperation of the Royal Canadian Dental Corps was invaluable. The response from our own members was gratifying indeed and your committee thanks each one. Some thirty-two Manitoba dentists have had to evacuate their homes or offices, having suffered varying degrees of damage by the flood. To these men and their families we extend our sympathy.

Kenneth M. Johnson,
President, Manitoba Dental Assn.
J. B. Rumberg,
President, Winnipeg Dental Soc.
J. Orwell Brown,
Representative of Executive of the
Winnipeg Dental Society.

The Flood of 1950.—Enough has been printed or broadcast about the ghastly episode of the past six weeks without dwelling further upon it. It is to be noted, however, that the dental profession of the district suffered in proportion to its numbers perhaps equally if not more than any other single avocation. About one of every six in the Red River valley were driven from their homes or their offices and some from both.

J. F. M.

Manitoba Dental Association.—When a dentist lives until he is well over four score years and has been in active continuous practice from graduation until he is nearly four score and has not made any enemies but on the contrary has enjoyed the respect and affection of all who knew him, one naturally seeks the reason for this unbeatable record. We firmly believe the basic reason is that he was a Christian gentleman, one of God's good men with all the gracious attributes associated with Christian living. Courtesy, graciousness, sincerity, a firm believer in living the doctrine of the Golden Rule, he was a dentist who rendered the best service he knew how to give with financial reward occupying

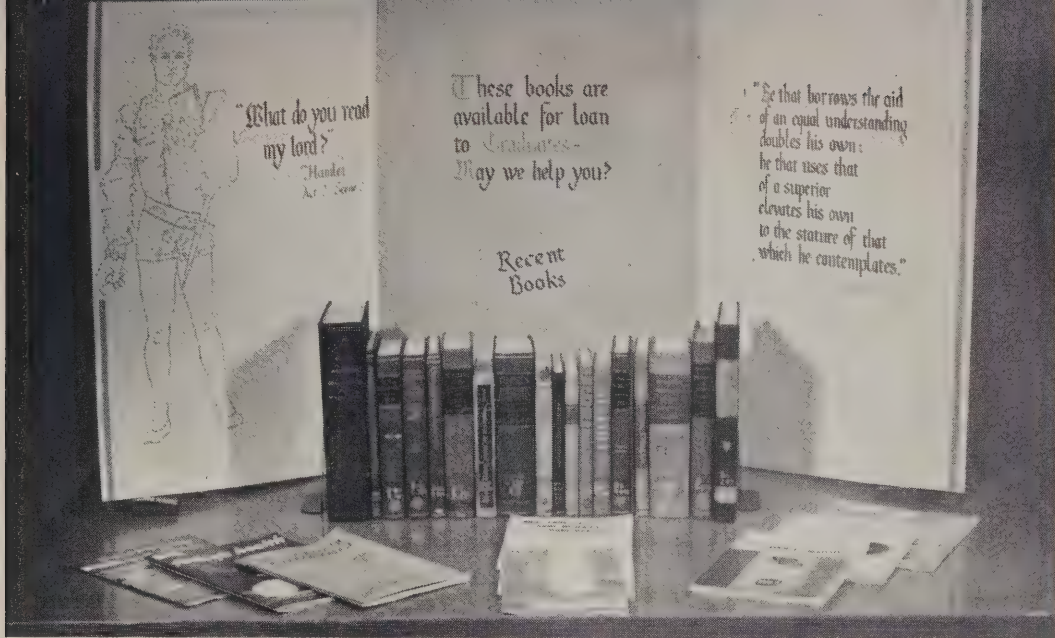


Table display of recent additions to the University of Toronto and Harry R. Abbott collections on the occasion of the 75th anniversary of the founding of the Royal College of Dental Surgeons of Ontario.

last place in his consideration. Such a description applies to the person whose obituary notice appears in this issue of the Journal, Dr. Charles H. Walsh, of Winnipeg. If all humans were such as he the World Wars and their attendant evils would never have been experienced. He and Mrs. Walsh, while she was living,

were tireless visitors at Deer Lodge Hospital extending countless kindnesses to the war wounded patients. We who knew him for almost half a century lift our heads with renewed courage and say, Hail, and farewell, Comrade! It was a privilege to have known you.

J. F. M.

Library display on the occasion of the 75th anniversary of the Royal College of Dental Surgeons of Ontario, showing the bust of the founder, Dr. J. B. Willmott in the centre with the succeeding Deans, reading from left: Dr. A. E. Webster, Dr. Wallace Seccombe, Dr. Arnold Mason and the present Dean, Dr. R. G. Ellis.



ONTARIO

Cleft Palate—The Faculty of Dentistry of the University of Toronto is undertaking a study of the problem of cleft lip and cleft palate among children and the effectiveness of corrective procedures. National health grants have been earmarked for this work.

Few health problems are as complex as cleft lip and cleft palate cases, health authorities state, for the patient requires the combined skills of a surgeon, an orthodontist, a psychologist, a speech therapist and often a prosthetist. This care is required at an early age and often is a severe financial strain on the parents for many years. The number of children involved is not large but they present an important public health problem.—Dept. Nat. Health and Welfare.

•
Essex County Dental Association.—

This Society has published its first annual journal. It is a newsy little booklet and of much local interest. The President Dr. Michael Strokon and his executive are to be congratulated on their efforts in directing the affairs of this association so successfully over the past year.

At a recent meeting three well known dentists in Western Ontario were singled out for honours. Dr. L. G. Hogan, Dr. Arthur Johnston and Dr. Donald M. McIntyre having completed 45 years of active practice were presented with barometers by Dr. Cecil Young on behalf of the society. Congratulations and best wishes for continued health and usefulness!

•
At the annual meeting of the **Brant County Dental Society** Ald. C. T. Beaman spoke on "Business Management." The following officers were elected: President, Dr. J. R. Hurton; Vice-President, Dr. R. L. Scott; Sec.-Treas., Dr. D. J. Badke; Directors, Dr. Bradley, W. Linscott and Dr. W. G. Hart.

•
At the Annual Meeting of **Kent County Dental Society** the following officers were elected: President, Dr. Harvey Hingst of Thamesville; Vice-President, Dr. J. C. Willard of Chatham; Sec.-Treas., Dr. Ross Drummond of Chatham; Councillors, Dr. John Woods of Dresden and Dr. H. S. Feagen of Ridgeway.

•
Public Dental Health.—Dr. Ralph Honey has been elected chairman of the Peterborough and District Public Dental Health Committee.

•
\$40,000 Suit.—An Ottawa dentist is being sued for forty-thousand dollars following the death of a patient in his office. All dentists should carry insurance against accidents in the office.

Faculty of Dentistry News, University of Toronto—Dean Ellis has announced a series of "Continuation Courses for Graduates in Dentistry", to be given in the autumn of 1950. A list of further courses during the winter and spring of 1951 will be published soon. These courses are arranged and conducted by the staff of the Faculty of Dentistry with the cooperation and financial support of the W. K. Kellogg Foundation of Battle Creek, Michigan. On occasion outstanding visitors will be among the lecturers and clinicians in these courses. The courses follow—

Anatomy as Applied to Dentistry:

September 13, 14, 15, 1950.

Enrolment limit 6. Fee \$50.00

Periodontics:

September 25-29, 1950.

Enrolment limit 14. Fee \$75.00

Orthodontics

(for the general practitioner)

November 6-10, 1950.

Enrolment limit 10.

Cephalometric Techniques

(for specialists only)

November 16-18, 1950.

Enrolment limit 10.

Dental Public Health Conference

November 16-18, 1950.

Enrolment limit 15.

•
Graduating Class in Dentistry, 1950—University of Toronto—In a graduating class of 170 receiving their D.D.S. degree from this University the following had first class honors:—

Ng S.C.; Jackson, Miss Marjorie; Pritchard, W. J.; Copeland, G. P.; Jones, E. A.; Caverley, S. E.; Wood, F. T.; Bates P. A.

The class prize winners were:—

Albert E. Webster Memorial Scholarship, W. J. Pritchard; Wallace Seccombe Memorial Scholarship, S. H. Jones; W. George Switzer Memorial Award, R. D. Glenn; Wallace Seccombe Prize for General Proficiency, W. R. Moore; Oral Health Theses Prizes, H. G. Travers, R. F. Evans; Dental Students' Parliament Prize, A. E. Jones; H. K. Box Medals—Gold, E. A. Jones, Silver, A. G. Andrews; Henry Thompson Scholarship F. T. Wood; T. E. Agate; Academy of Dentistry Prize, A. V. Scrutton; Prosthodontia Essay Prize, M. J. Crockford; Mary Adele Memorial Scholarship, A. J. Harris; Alpha Omega Fraternity Medal, S. C. Ng.

•
Graduate dentists receiving further degrees or diplomas were:—

B.Sc. (Dent.) Dr. R. T. Lo.

Diploma in Dental Public Health: Chegwinn, Dr. A. E.; Grainger, Dr. R. M.;



ANNETTA K. ANDERSON



MARION ANDERSON



AVONNE AVERY



MIRIAM R. BAILEY



JOYCE E. BAUER



HELEN BEATTIE



BETTY BENNETT



CARMEN BURROWS



JOY CAMERON



JOAN M. COOPER

MISS WELDA LEASH, O.N.
SUPERVISOR

JEANNETTE DEANS-BROWN



JOAN ETNES



DUDLEY FLEMING



ELVIO FRASER



ELIZABETH J. MARTIN

DENTAL NURSING

UNIVERSITY

of

TORONTO

GRADUATING CLASS-1950



ELEANOR C. NORMAN



MARY MUSKE



MARIA McLEAN



ELEANOR J. MCSULLIVAN



DOROTHY G. MCVISH



PATRICIA L. SAVOY



YVONNE TAYLOR



BARBARA A. TILLEY



JEAN WARREN



ANN WHILLANS

Lawrence, Dr. J. W.; McCombe, Dr. F.; McDonagh Dr. W. A.; Scott, Dr. N. H. (Medicine, Periodontology and Radiology.)

Diploma in Periodontology: Currie, Dr. Margaret.

Class in Dental Nursing.—These 25 young women were enrolled in the course in Dental Nursing during the past academic session. They were selected from a large number of applicants on the basis of academic standing, character and personal fitness for the course.

The curriculum of the Dental Nursing course is adjusted constantly to keep it in accord with the trends in dental practice, and the graduating dental nurse is qualified, therefore, to give the necessary assistance in a dental office.

The prize winners of this class were—Y. Taylor, First General Proficiency Prize; B. Bennett, Second General Proficiency Prize; A. Whillans, Dental Nurses' Alumnae Prize; J. E. Bauer, The Christina Arkle Dental Anatomy Prize.

Grey-Bruce Dufferin Dental Society.—The annual field day of the society was held at Owen Sound. Golf was the chief feature of the day with Dr. Gord Johnston of Toronto and Dr. M. Hawton of Collingwood bringing in a tie score of 81.

Following golf everyone sat down to a grand dinner to bring the day to a satisfactory conclusion. There were some impromptu after dinner speeches by Drs. R. J. Godfrey, R. S. Woollatt, Clarence Beebe, J. H. Duff and G. H. Campbell.

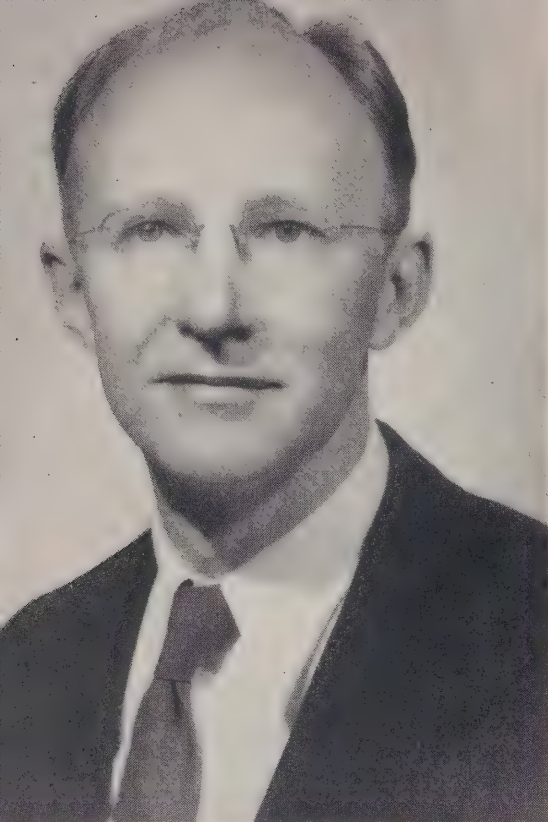
The new executive for 1950-51 are:

President, Dr. J. A. McArthur, Markdale; Vice-President, Dr. E. W. Sadler, Owen Sound; Secretary Treasurer, Dr. Robert McKee, Owen Sound.

Directors: Drs. C. Sudden, Dundalk; M. Hawton, Collingwood; E. Weiler, Mildmay; W. G. Bruce, Kincardine.

London Dental Association.—The annual Golf Tournament of this Society was held June 8 at the Highland Golf Club. Fifty-seven played golf and 96, a record attendance, sat down to an excellent dinner. Many towns and cities were represented including Toronto, Hamilton, Brantford, Kitchener, Stratford, Ingersoll, Woodstock, St. Thomas, Tillsonburg, Aylmer, Blenheim, Windsor, Sarnia and others. Eight recent graduates were also in attendance—Doctors Shaw, Harris, J. G. Millar, Whiteman, Scrutton and M. R. Millar, also Tom Kennedy, Mount Forest, and Pat Hague, St. Thomas. It was most pleasant to have some of the old reliables with us too.

The best golfer of the day was Dr.



DR. I. F. CALDER
Brockville

Hugh Smith of Brantford with Dr. Gord Johnston of Toronto runner-up.

Other prize winners were—Drs. Ernest Reid, Wm. Joynt, J. E. Hackett, J. Garrett, Harold Windrim, J. E. Peterson, G. E. Harper, J. W. Boyd, J. B. Clarke, G. W. Cornell, D. A. Campbell, John Reid, Charles Peterson, R. J. Sutherland, L. Stapels, J. Woods and Mr. Jack McTavish.

Eastern Ontario Dental Association Convention, Chateau Laurier Hotel, Ottawa, September 17, 18, 19.—The program of this meeting has been arranged to include Dental Public Health, Essayists, table clinics, commercial exhibits and social functions. Dr. Philip Modjeski of Medical College of Virginia and Mr. Denton Smith, Bureau of Standards, Washington, will be among the guest speakers. There will be golf, and a musicale on the Sunday evening; a buffet dinner dance on Monday evening and the usual association dinner with Rev. Clarence J. Findley as special speaker.

President Dr. Irving Calder has extended a cordial invitation to members and friends of the association to be sure and come.

QUEBEC

Endodontics is not for specialists, stated Dr. George P. Hare to the members of **The Montreal Endodontia Society** at their first meeting of the 1950-51 season; the present day graduate is well qualified to perform any and all operations in this field.

Presented by the president, Dr. Louis Rosen, Dr. Hare, Asst. Prof. of Operative Dentistry in charge of Endodontics at the University of Toronto delivered a paper on "The Unusual in Endodontics," after which he presented a film demonstrating a method of performing an immediate root canal treatment followed by resection.

From his own files and those of the University of Toronto, Dr. Hare discussed many unusual cases which he had been called upon to treat, such as root canals and draining for a year or more . . . cases requiring therapy where it was necessary to perform an apicoectomy, or polish the apex of the root, following the filling of the canal from the apical end of the tooth . . . teeth completely knocked out of young individuals which could be replanted and made to last for a number of years . . . fractured crowns (complete) where, following the obliteration of the canal, the remaining fractured portion, by the use of an iridio-platinum wire loop, could be cemented to the root portion . . . and many other interesting and unusual cases which are not normally covered in the average textbook.

In the film that followed showing immediate root canal sterilization and root resection, Dr. Hare stressed that the patient must be in excellent health, preferably under 35 years of age, and that the case must be absolutely chronic. Following pre-medication, the canal is cleaned, filed, irrigated thoroughly under aseptic conditions, and a cement filling inserted. The rubber dam is now removed and a local anaesthetic administered. The dam is now replaced and the root canal, under the anaesthesia, ionized for six minutes at 5 milliampères. The canal is again thoroughly irrigated to prevent any discolouration of the tooth, and completely obliterated with gutta percha points using lateral condensation. With regard to drying the canal, Dr. Hare mentions that the Caulk paper point has from 4 to 5 times the absorbency of the usual points. The excess gutta percha is now removed and a cement inserted.

If the x-ray shows that the canal is completely obliterated, an incision is made over the apical region, and with the use of hand chisels, which he prefers to the bone burr, the apex is exposed.

Mastoid curettes are used to clean the area and the root apex thoroughly polished; following suturing, compound tincture of benzoine is used over the wound.

In an interesting question period which followed, Dr. Hare mentioned that regeneration following conservative treatment takes from two to three times as long as when curettage or resection is resorted to. Also, if conservative treatment is used, surgical treatment is also indicated if no regeneration is evident within six months. An interesting remark was made by Dr. Hare when he stated that work done at the U. of T. indicated that it was impossible to determine by x-ray whether a radiolucent area was a cyst or granuloma. The speaker was thanked by Dr. E. T. Bourke.

At the dinner preceding the meeting which was held on May 22 Dr. Rosen announced the presentation of prizes to the leading students in Endodontia in the final year: the winners were: U. of M.:—Gaeton Ouellet and McGill:—Earle A. White.

R. F. H.

McGill University:—The annual dinner meeting of the teaching staff of the Dental Faculty, McGill University, was held on May 23 in the Faculty Club with Dean D. P. Mowry in the chair.

Following dinner, Dean Mowry discussed briefly the work being done by the many different departments and stressed the fact that gradually dentists are being trained to teach all the basic medical sciences to dental students; at the present time the main departments without trained dental personnel are the departments of Bacteriology, Biochemistry and Physiology.

The Dean claimed that the graduate of today should be well founded in the basic sciences, as well as possessing digital skill, and should possess sufficient training so that he may advance and even specialize, in any phase of dentistry—with the possible exception of orthodontia.

Former Dean Arthur L. Walsh then presented to the Faculty, Dr. Charles H. P. Moore who has retired from the teaching staff after serving more than thirty years. Quiet, unassuming, sincere, helpful and with a wealth of years of knowledge, Charlie Moore, said Dr. Walsh, has been of inestimable help in developing the many graduate dentists of the past, and has played an important role in the gradual improvement of the Dental Faculty. In reply, Dr. Moore reminisced on the many changes which have occurred since he first became a demonstrator in 1918, and thanked the faculty for their kindness in honouring him. Dr. Walsh presented Dr. Moore

with a complete fishing outfit from the Faculty.

Dean Mowry also announced the retirement of Drs. Reg. Winn and Ross Murray.

R. F. H.

For the eleventh time, and the fifth consecutive year, Dr. Arnold Mitchell won **The Montreal Dental Club** annual golf championship held as usual, at the Knowlton Golf Club, Knowlton, Quebec, June 2-3-4. The usual 27 members of the club attended the two day meet and tried in vain to unseat Arnold from his throne. Dr. Arthur Walsh, however, was right behind—by only one stroke—and captured the second low gross cup, with Dr. Gordie Crutchfield coming in third.

Low net went to Dr. Paul Rowe, who recently forsook Montreal to take up practice in Cowansville, Quebec, he smashed par with a 67 net. One stroke behind came Archie Cameron and one stroke behind him, Paul Ramsay. (The only face the writer could attain was to claim having missed as many one foot putts as the champion!)

Much to the amazement of the golf committee composed of Drs. Mitchell, Roger McMahon and Bob Harvey, everyone seemed to win a prize of a golf ball so everyone left for home happy. A raffle of a golf bag ended with Dr. Peter Ostapovitch being the lucky ticket holder.

Dr. Art Donohue concluded the festivities on a happy note by recommending that Dr. Mitchell be allowed to keep the cup which he has won so often and he would be proud to present a new trophy to be called the Arthur L. Walsh Trophy for the club championship. The President, Dr. Sid MacSween, thanked Dr. Donohue and said that he would certainly bring his offer to the attention of the Executive of the Club for their consideration.

R. F. H.

NOVA SCOTIA

Federal Health Funds totalling \$9,000 have been allotted this year for a division of dental hygiene in Nova Scotia's Department of Public Health. This grant continues a project first begun last year under the national health plan. This work is concentrated on the prevention of dental ailments, especially among children. The federal grant meets the salaries of the division's staff and pays for supplies and materials needed in its work.

BRITISH COLUMBIA

British Columbia Dental Association.—For the first time in its history the annual convention was held in the interior of the Province. The meeting at Kam-



Window Display in Hudson's Bay Store at Kamloops during the Convention of the British Columbia Dental Association.

loops was most successful, great credit being due to the small but enthusiastic group of Kamloops dentists.

Members of the Association from interior points were present in force, and this was a particularly gratifying feature, in view of the fact that they had not found it convenient to attend meetings in the coast cities in large numbers in past years.

Another deviation from routine procedure this year was the appointment of a general chairman of the convention, which centralized program and arrangements committees under one head, rather than having all committee chairmen report directly to the executive committee.

The principal speaker was Doctor Roy G. Ellis, Dean of the Faculty of Dentistry, University of Toronto. His morning subject was "Direct Plastic Fillings versus Present Day Restorative Procedures." Doctor Ellis particularly stressed the limitations of the new plastic filling materials, and expressed concern lest the members of the profession use them indiscriminately, instead of restricting their use to restorations, the margins of which are not subject to the stresses of masticatory forces.

At the afternoon session Doctor Ellis

spoke on "The Child Patient, the General Practitioner, and the Future."

Also speaking at the morning session was Doctor Wendell Wylie, Director of Post Graduate Studies at the University of Washington in Seattle. His morning lecture was "The Parent and the Dentist Look at Growth". In the afternoon, he spoke on "The Vertical Dimension in Dentistry".

On the second day, sixteen table clinics were presented, as well as three chair clinics. Clinicians were present from Vancouver, Victoria, University of Washington in Seattle, Portland, Spokane, Chilliwack, and Longview, Washington.

The following slate of officers and executive committee were appointed for the coming year:—President—Dr. J. F. Mercer, Victoria; President-elect—Dr. John Ingledew, Vancouver; Secretary—Dr. W. Milburn, Victoria; Treasurer—Dr. D. J. Sutherland, Vancouver; Directors—Dr. Leslie Marshall, Vancouver, Dr. J. Ewart Gee, Victoria, Dr. L. W. Beamish, New Westminster, Dr. L. Alexander, Haney, Dr. M. Butler, Kelowna.

An informal gathering was held at the Kamloops Golf Club on the first evening, and a ranch style outdoor dinner



HEAD TABLE AT DINNER ARRANGED BY EDMONTON DENTAL SOCIETY FOR DOCTOR JOHN W. CLAY OF CALGARY

Left to right: Dr. W. Orobko, Dr. A. W. Park, M.D., Calgary, Dean W. Scott Hamilton, Dr. John Clay, LL.D., Dr. Harold Knight, Dr. A. H. Abrens, Lethbridge, Dr. W. McIvor, Dr. A. Steeves.

was served at a ranch near Kamloops on the second evening. The atmosphere, the refreshments, the ranch-style clothing sported by many of those attending all contributed to a hilarious evening.

Vancouver and District Dental Society

—At the last meeting of this Society the following officers were elected:—President—Dr. Clay R. Hallman; President-elect—Dr. H. L. Purdy; Secretary-Treasurer—Dr. N. H. Scott; Elected to Board—Dr. I. E. Snider, Dr. G. I. Creasy, and Dr. D. H. Warren.

ALBERTA

At the May 12 meeting of the **Calgary Dental Society** forty-two dentists gathered at the Ranchmen's Club to honour Dr. John W. Clay who was to be given an LL.D. degree at the spring Convocation of the University of Alberta.

The president of the Calgary Dental Society, Dr. Spencer Lea, prior to introducing the speakers, referred to the great honour Dr. Clay had brought upon dentistry, as well as upon himself.

Dr. A. Steeves referring to the degree stated that it is the first time that a dentist of Alberta has received the LL.D. degree, and that we all feel honoured in having, in our profession, and as a friend, a man considered worthy by the powers that be, to receive this degree.

He mentioned how Dr. Clay has always given a helping hand to all young dentists starting up in the profession. He outlined some of the positions that Dr. Clay has held, which are as follows: a member of the Board of the Alberta Dental Association, and Provincial Registrar for a number of years; Alberta representative to the Canadian Dental Association, and finally its president in the years 1926-28; Vice-President of the Western Canada Dental Society; representative on the Dominion Dental Council; President of the Calgary Dental Society; Treasurer of the Western Canada Dental Society 1947, and now again its first Vice-President. In 1929 he was one of the first group to receive the F.I.C.D. Then in 1949 the University of

Alberta appointed him as an honorary lecturer in dental surgery, which position he has filled since. He has been on the Quota Committee since its formation. For a number of years he has been acting as liaison officer between the profession and the University. He is a member of the local hospital staff and lectured for a number of years to the under-graduate nurses. Then in his spare time he prepares and presents clinics on Dental Surgery and X-ray Interpretation anywhere from Toronto to Vancouver. His posts and services and responsibilities have been many and heavy for a man with a busy practice.

Dr. Steeves then gave the Society some personal glimpses of Dr. Clay as

Dr. Ernest M. Doyle (left) of Calgary presenting smoking stand to Dr. John W. Clay, F.I.C.D. (right), May 12, 1950, at the complimentary banquet tendered to Dr. Clay by the Calgary Dental Society.



he knows him, referring to his hobbies of fishing and hunting.

Dr. E. Doyle was then called upon to make the presentation of an inscribed smoking stand, the gift of the Society.

Dr. Murray McCaffery then made the statement that he knew of no dentist who had the interest of the profession more at heart than Dr. Clay, and that the members of the Society are constantly seeking his advice.

Telegrams of congratulations were read.

Dr. Clay in his reply acknowledged the honour of the evening. He said that he felt that his most valued acquisitions are his friendships. He said that he wished it understood that the degree being conferred upon him was a mark of recognition for the great service of the profession as a whole, rather than an honour to himself as a single member of the profession. Dentistry is a young profession which has been under critical view and has created a favourable impression.

In conclusion he stated that on behalf of the dental profession he would do his best to make a favourable Convocation address.

R. T. Shillington

On May 2 the **Edmonton Dental Society** held its annual meeting at which the following officers were elected: President—Dr. Don McIntyre; Vice-President—Dr. Bruce Cameron; Secretary—Dr. Bill McIvor; Treasurer—Dr. Bill Orobko; Social Convener—Dr. Allan Fee; Directors—Dr. Knight, Dr. J. D. McLean, Dr. Johnstone (Fort Sask.)

Following the election of officers two remarkable films with commentaries were presented by Dr. W. E. Addinell. The first film was in colour and showed the preparations made for the filming and the taking of pictures of the dropping of the first atom bomb at Bikini. This was an outstanding film. The second film showed the destruction of property and buildings and the types of casualties to humans caused by the dropping of the atom bombs at Hiroshima and Nagasaki.

One of the most outstanding dinner meetings of this Society took place on May 16 in the Macdonald Hotel in Edmonton. **This was a special meeting called in co-operation with the Alberta Dental Association to do honour to Dr. J. W. Clay of Calgary** who the following day had the degree of Doctor of Laws conferred on him by Dr. F. McNalley—Chancellor of Alberta University.

Besides a large turnout of the Edmonton dentists, men came from all parts of the Province to congratulate Dr. Clay on the signal honour bestowed on him; it being the first time in the history of Alberta University that this degree has

been conferred on a member of the dental fraternity.

Special guests included two very old friends of Dr. Clay's, Dr. J. K. Mulloy, Medical Superintendent of Colonel Belcher Hospital in Calgary and Dr. A. W. Park, retired District Administrator of The Department of Veterans' Affairs for Alberta. It was especially pleasing to see Dr. Clay's young son Donald, who came up from Calgary to see the degree conferred on his dad. Several of the Calgary dentists were also in attendance and greetings were delivered by Dr. A. Steeves of the Calgary and District Dental Society, and Dr. Park of Calgary. Congratulatory letters and telegrams were received from many points in Canada.

Dr. A. Ahrens of Lethbridge, President of the Alberta Dental Association, as main speaker of the evening gave a very eloquent address and extolled the virtues of the guest of honour in the following words.

"This occasion is indeed a very happy one. Through the generous hospitality of the Edmonton members we are gathered here this evening to pay tribute to one of our most worthy members of the dental profession. The Senate of the University of Alberta has seen fit to bestow upon John William Clay the honorary degree of Doctor of Laws. This high honour, is the first to be given to any member of the dental profession in Alberta, and it is truly significant in that it signifies the esteem and influence Dr. Clay has had on the **public mind**, as well as acknowledging his outstanding services in our own profession.

There are many here tonight who are closely associated with Dr. Clay and who could, if called upon, give intimate glances into a life which has been exemplified by fine outstanding services to the community in general, and to the profession in particular. My acquaintance with Dr. Clay has, unfortunately, been less personal, and mainly in a professional way, so it is on his professional career that I would like to dwell briefly this evening.

Let us try to analyse the factors which have contributed to make Dr. Clay so worthy of the honour he will receive tomorrow. These qualities are shown in his own character, and they are tangible things which exist and can be seen by all who are in daily contact with him. It is this day-to-day existence which makes up the greatest part of every person's life and it is, therefore, the qualities shown day by day that are important, and not those qualities only occasionally displayed.

To me, three great qualities stand out in Dr. Clay's professional life. They are his industry . . . his talent . . . and

his personality. It is said there can be no true feeling of successful endeavour without being industrious, no matter what occupation one undertakes. Dr. Clay realized this and with commendable foresight saw that only through his own industry would he succeed in his chosen profession.

He arrived in Calgary in 1908 and started a practice of dentistry. It expanded into one of the finest practices in Alberta. Yet, during these past 42 years I am sure many times he has said to himself—"I have done my share for dentistry, I will relax," which he could have done so easily. It was not to be so, because this quality of industry does not permit let-up or slackness. For that one reason alone Dr. Clay retains his spirit of youthfulness and an interest in dental affairs, rarely given to any one individual. His industry has kept him well-informed . . . it has created new interests for him . . . it has stimulated his thoughts and ideals in everything relating to his professional life.

With this industry there develops gradually, in a person, a feeling that more should and could be accomplished. Nothing seems to interfere with this cycle, and these accomplishments are irrefutably associated with that spirit of "inspiration in one's professional work." How well this description fits Dr. Clay . . . how much he has accomplished during the forty-four years in the practice of dentistry . . . what a tremendous amount of good he has done during this period. We can well marvel at Dr. Clay's industry.

However, without talent industry may be wasted. Talent is a more intangible quality and not given to all people. Dr. Clay's professional career indicates a full share of talent for the profession he chose. This talent helped to give him the opportunity to become extremely efficient in the general practice of dentistry. Later on, this talent for dentistry was rediscovered in the more exacting techniques of oral surgery. He recognized the need, some years ago, for more general skilful handling of dental surgery cases, and set about improving his own technique, and learning more about this specialized branch of dentistry. I am sure there were many pit-

falls and discouragements during these early years, but, by his tenacity of purpose, by his industry, and his skill, he has become one of the well known dental surgeons in Western Canada.

We are all appreciative of the exceptional professional abilities of Dr. Clay, but his talents extend farther afield. When we survey the administrative and executive work he has done during the past years, on numerous dental boards and dental associations, we find he has been one of our most active men in dealing with the executive branch of dentistry. It is not generally known that Dr. Clay was primarily responsible for the present organization of the Canadian Dental Association, during his terms as president of the Association in 1926-28. Even now he rarely misses attending the meetings of the Alberta association and his counsel is often asked for and freely given. This exceptional interest in the board aspects of dentistry is not given without having a genuine interest, and in Dr. Clay's case this is due mainly to the two qualities I have just mentioned.

There is still another quality, important in itself, needed to maintain friendly relations with the many hundreds of people constantly associated with the professional man, I refer to a man's personality and integrity. Personality is so important and the personality that best fits the professional man can be expressed in two words—**sincerity** and **friendliness**. How well these two words fit into the character of Dr. Clay. They culminate the final expression of his character in his day to day routine, which makes up the life of the professional man, and as such portray the man he really is. Gentlemen . . . the qualities I have shown as being truly a part of Dr. Clay's character have manifested themselves in the reward which brings us here this evening."

Dr. Ahrens assisted by Dr. W. E. Addinell, on behalf of the Alberta Dental Association then presented Dr. Clay with the gown, hood and mortar of the degree of Doctor of Laws, after which Dr. Clay thanked everyone for the wonderful hospitality and congratulatory messages received by him.

W. E. A.

DENTAL NURSES AND ASSISTANTS

CANADIAN ASSOCIATION

Canadian Dental Nurses' and Assistants' Association—The fourth meeting of this Association was held at the Royal York Hotel, Toronto, on May 15 with the President, Mrs. Marion Edwards, in the chair. On the platform with her

was the 1st Vice-President, Miss Margaret Good of Montreal, and the Secretary-Treasurer, Mrs. Irean Bruce of Toronto.

Delegates were present from Winnipeg, Saskatoon, Edmonton, Montreal, Halifax, and many parts of Ontario.



MARCIA BOYCE

President of the British Columbia Dental Assistants' Association.

The President gave her report of her trip to the Maritime Provinces, where new Associations were organized and several new Canadian members obtained.

Telegrams were received from all over Canada, from the U.S.A. and from England.

Dr. M. H. Garvin of Winnipeg gave the opening address and a message of inspiration to all.

Plans were laid for the incorporation of the Association at Ottawa during the coming year—and ideas for study and lectures for the qualification of assistants across Canada.

The Treasurer gave a good report of money on hand and a membership of over 400 was noted.

The officers elected for the coming year are:—President, Mrs. Marion Edwards, Toronto; 1st Vice-Pres., Miss Margaret Good, Montreal; 2nd Vice-Pres., Mrs. Grace Lambert, Vancouver; Secretary-Treasurer, Miss Ernie Derrick, Montreal; Membership Conveners appointed, Miss Florence Worobec, Moosomin, Sask., for the Western Provinces; Miss Florence Limoges, Montreal, for the Eastern Provinces.

The next meeting will be held in Ottawa September 1951.

NURSES ALUMNAE

Miss Dorothy Dearing, President of the **Dental Nurses' Alumnae Association of Canada**, and Miss Irene McKenzie, Convention Convener, are to be congratulated on the conduct of the 1950 Dental Nurses' Alumnae Association's Annual Convention at the Royal York Hotel from May 15-17.

The scientific section of the program included Dr. E. Romly Romine, Detroit; Dr. C. Franzwa, New York City; Dr. Hermann Becks, San Francisco; Dr. W. J. Dunn, Toronto; Dr. Roy G. Hemmeriel, Kitchener; Mrs. Naomi Beard, Beauty Counsellors of Canada Limited; Miss Val. Day, Trans-Canada Air Lines, and Mr. K. F. Bloniarz, Midwest Dental Manufacturing Company, Chicago. Table clinics were presented by four of the members: Miss Audrey Billings, Miss Shirley Baker, Miss Mary Skey and Miss Marilyn Speck.

The essayists and delegates were honoured at a reception on Sunday evening following the Canadian and Ontario Dental Associations' Musicales. To mark thirty years of dental nursing, past presidents of the association were introduced to the Reunion Luncheon by Miss Dorothy Dearing in the hotel library. At the head table were Dean Ellis, Dr. J. Kreutzer and Dr. E. W. Paul, members of the Advisory Board and the Executive. A large attendance enjoyed Rev. W. J. Johnston, D.D., as he told of a recent visit to the British Isles.

This Association honoured the graduating class of Dental Nurses at a tea on June 4th, at the home of Miss Irene McKenzie. Among the guests were Dean and Mrs. Roy G. Ellis, Dr. and Mrs. Don W. Gullett, Dr. P. W. Arkle and his father who had just arrived from Scotland, Miss Welda Leask, Supervisor of Dental Nurses-in-Training.

The First and Second R.C.D.S. General Proficiency Prizes were presented to Miss Yvonne Taylor and Miss Betty Bennett by Dr. Gullett. The Christina Arkle Anatomy Prize was presented to Joyce Bauer Agate by Mr. Arkle. Anne Whillans received the Alumnae Gold Ring from Miss Dearing.

A presentation of sterling silver was made to Dr. Marjorie Jackson, a past-president of the Alumnae, who received honors in her final examinations at the Faculty of Dentistry. Miss Dorothy Dearing, a July bride-elect, was presented with the Alumnae wedding gift, a silver roll tray, by Irene McKenzie. Dean Ellis, Chairman of the Alumnae Advisory Board, was recipient of a bon voyage gift.

A. Cowling

BRITISH COLUMBIA

The Fourth British Columbia Dental Assistants' Convention was held in Vancouver, B.C., on May 6-7 with 90 girls being registered.

The convention opened with a few words of welcome from Miss Jean Parker, President of the B.C.D.A.A., followed by greetings from Fraser Valley, New Westminster, Victoria and Vancouver.

Guest speakers were Mrs. Wynne Saunders, Head of the Department of Radiography, Portland Dental College, who gave a lecture and chair clinic on "Aids in Radiographic Technique," and Doctor Kyle Berry of Vancouver, who spoke on "Some Suggestions Towards Patient Management."

Six very interesting table clinics were presented, with the silver trophy going to Miss Marion Bruce for the best clinic.

Following the Annual Meeting the

Candlelight Installation of Officers took place with Mrs. Wynne Saunders acting as Installing Officer. Those elected were: President, Marcia Boyce; Vice-President, LeVerne McColm; Secretary, Yvonne Taylor; Treasurer, Marion Bruce; President-elect, Lillian Hansen.

Entertainment at the convention consisted of a luncheon on Saturday and a cocktail party, followed by a banquet in the evening. On Sunday there was a brunch and a tea.

SASKATCHEWAN

Thirteen members attended the May meeting of the **Saskatoon Dental Nurses' Society** to hear Dr. P. Rabatich who showed histological slides, also two films entitled "Open Water Please" and "Winkie the Watchman." He also gave a short talk on the "Structure of the Tooth."

P. Halvorson

BRITISH COMMONWEALTH NEWS

GREAT BRITAIN

The Cut.—Faced with the decision of the Minister of Health to make an overall reduction of 10 per cent in the scale of fees, the Representative Board of the British Dental Association resolved that they could see no useful purpose in continuing negotiations on remuneration with the Ministry in the existing conditions. There can be little doubt that this decision will be endorsed by the profession. Negotiation implies the careful weighing of all the factors relevant to the matters under discussion, and it becomes a travesty when one party to the discussions makes an arbitrary decision based, as is this latest decision of the Minister, on only one of those factors. It appears to be clear that this decision has been forced upon the Minister by the overriding authority of the Treasury. The Health Service is costing more than the Government expected it would. This will, doubtless, be referred to as a reduction of the remuneration of the dentists by 10 per cent, regardless of the fact that, since the expenses of practice are not affected by the cut, the actual net income which a dentist can earn in the Health Service will be reduced by a very much greater percentage.

It is, indeed, one of the worst features of this arbitrary cut that while, like the rain, it will fall on the just and the unjust alike, it will reduce the net income of the careful, conscientious practitioner, with a high ratio of overhead expense, to a much greater extent than the over-

all average. It is an inherent defect of any fixed scale of fees that it puts a premium on pace, and this indiscriminate reduction will still further accentuate that tendency which the unexpectedly high demand rate for dental treatment had already brought into conspicuous relief.

It will be generally agreed that there is a prima facie case for the investigation of some of the cases in which dentists have been in the receipt of excessively large sums of money from executive councils. If such enquiries were to reveal that the dentists concerned had been guilty of scamped work, the profession would be the first to condemn them. But to cut the remuneration of every member of the profession because some less reputable dentists are suspected of exploiting the service, is unpleasantly reminiscent of the practice of enacting a fine from a city because some unidentified citizen has committed an offence against an occupying power. And the action of the Minister is calculated to antagonize those members of the profession who are doing their best, in very trying conditions, to meet the demands on their services, and to maintain the standard of their work. — Condensed from editorial in *Br.D.Jour.* May 5, 1950.

Cost of National Health Service.—It seems that the finances of the N.H.S. have got completely out of hand. Indeed, this is what might be expected to happen if the public is told that in effect it may

have just what it asks for without having to make any direct payment at the time of getting it. Our correspondent asks the pertinent question, "How much longer is this to go on?" As taxpayers doctors have some interest in the answer to this question. As recipients of money from the State for the work they do they must see less and less chance of having their remuneration increased if they are to be satisfied that the recommendations of the Spens Committee are being fully met. As doctors, too, they will be alarmed at one unforeseen anomaly—the neglect of children's teeth. Many practitioners have drawn attention in our correspondence columns to the unreasonable claims made by patients for common household remedies and appliances coupled with the threat that the services of another doctor will be sought if the practitioner is not compliant. One way of meeting this abuse would be to make it impossible for a patient to change his doctor in less than three months, which was the limit imposed under National

Health Insurance.—Excerpt from *Br. Med. Jour.* March 18, 1950.

AUSTRALIA

Distribution of Nurses.—A nurse in every Australian home is the ambitious aim of the St. John Ambulance Association. In cooperation with the Australian Red Cross Society, the association hopes to train one member—preferably a woman—in every family to care for the sick. The program is designed to relieve overcrowding in hospitals. The Red Cross and the association . . . will issue certificates of proficiency to graduates in their nursing courses. Instructions are given by the association wherever it has stations; in other areas the Red Cross takes over the training. Ambulance stations are situated in all metropolitan areas, in most of the larger provincial centres and in many small rural towns. Through this network the broad nursing program is directed.—*N. Y. Times* per Public H. Econ.

GENERAL NEWS

Unreduced Dislocations of The Jaw.—Dr. Otto Gottlieb of Copenhagen states the following in *Tandlaegebladet* Feb., 1950:

"At the University Hospital in Copenhagen, Department of Oral Surgery, one unilateral dislocation of the mandible—of two years' standing—and two bilateral dislocations—of 9 and 4 months' standing—were seen in the course of one year. All underwent condylectomy. At the follow-up examinations one year, eight months and three months respectively after the operations, the masticatory function was painless and adequate in all cases, and no change in the appearance of the patients was noted."

Contributions to A.D.A. Relief Fund Hit New High.—More than 30,000 contributors to the American Dental Association Relief Fund had donated by \$78,857.52 by mid-March, as a result of Christmas Seal sales and a follow-up "red letter" appeal in February.

From March 1 to 15, 933 contributors had mailed in \$3,071 for addition to the Fund. All contributions are used exclusively to provide financial assistance to members of the dental profession who, through accident or illness, are unable to support themselves.

Mortality Among Specialists in Medicine.—The study of mortality rates within the medical profession shows that the specialist group as a whole enjoys

the striking advantage of a mortality about one-third lower than the non-specialist, with an even greater advantage before age 55. Specialists in tuberculosis show the highest mortality in the group, although even then being lower than in the non-specialists. Radiologists and dermatologists show the next highest mortalities. The most significant fact here is the frequency of leukaemia amongst radiologists with a high cancer rate among dermatologists. It is also to be noted that these two groups have the highest death rate from coronary disease and angina. Neurologists and psychiatrists also have a comparatively high cancer rate.

The pathologists enjoy the lowest mortality rate of all, followed by internists and paediatricians, and these latter also enjoy a lower mortality from coronary disease and angina than any other specialty. Surgeons seem to have a somewhat higher rate of mortality, although still well below the non-specialists. On the other hand they show the lowest rate for cancer of any specialty.

Why specialists should be so favoured may perhaps be attributed to their self-selection for continued studies, to higher incomes, and to more favourable conditions of work.—*Canadian Med. Assoc. Jour.*, April 1950.

Fiftieth Anniversary of the "Société Belge de Stomatologie"—On May 18-22 this Society celebrated its fiftieth anniversary.

ersary at the Casino of Knokke-sur-Mer. The aims of the Society are scientific development and defence of professional interests.

Textbooks for Foreign Universities—

The American Dental Association has launched a campaign to raise funds to replace dental textbooks and reference works in war-damaged university libraries.

The drive is to be administered through the CARE book program of the United Nations Educational, Scientific and Cultural Organization.

Public Dental Service in Norway—

Under an Act passed by the Norwegian Storting last year systematic dental treatment is to be provided in Norway free of charge for all children and adolescents between the ages of six and eighteen years of age and for the rest of the population at fixed rates, lower than the fees usually charged by private practitioners.

Each district will have its own clinic or clinics in which treatment will be given, and the Act provides that no other institution shall be entitled to the description Dental Clinic. It is estimated that some 925 dentists, some full time and some part time, will be required to carry out the necessary treatment.—*Br. D. Jour. March 3, 1950.*

Dental Laboratories in New York State.—According to an editorial in the *N.Y. Journal of Dentistry* the dental prescriptions law of the State of New York may be said to have substance and meaning for the first time since its enactment when Governor Dewey on April 13 signed the amendment to the education law in relation to dental prescriptions.

In 1948 Maxwell A. Heckler of New York wrote the following: "To all who are familiar with the Frankenstein anecdote, it may be recalled that he created a monster, which later turned upon and sought to destroy him. In like fashion the dental profession is now confronted with a dental Frankenstein. This monster created by the dental profession now looms up on the dental horizon as a towering force, to confute its creator, in the form of proposed legislation for the registration of dental laboratories."

Apparently this prediction was only too true as the laboratories went directly to the public by means of paid advertisements in the press and on the radio in the attempt to undermine public confidence in the dental profession.

The editor of the *N.Y. Journal* referred to above points to show that the laboratories went out of their way viciously to attack the dentists who, as recognized by the laboratories themselves, are the only customers of dental technicians. The editor goes on to say "Is it not time that dentistry, especially in New York City, gave thought to the elimination of this growing cancer which by the well-recognized process of oft repeated half-truths and untruths may yet succeed in shaking public confidence in the profession? As long as the laboratories see fit to employ persons whose main concern is to fight and belittle dentistry in the eyes of the public, instead of exploring and furthering areas of agreement, then it is up to the profession to think in terms of doing away with the laboratories. Direct employment of technicians on a cooperative basis deserves serious consideration."

Dr. Robert W. McNulty, Dean of Loyola University's Chicago College of Dental Surgery, has been appointed Dean of the University of Southern California School of Dentistry.

A recognized national leader in dental education, Dr. McNulty is chairman of the Council on Dental Education of the American Dental Association.

In the 1949-50 **Canadian Dental Association War Memorial Essay Contest** Dr. P. J. Gitnick acted as one of the judges in place of the late Dr. Thomas Cowling.

\$40,000 Grant—The University of Illinois College of Dentistry has received a \$40,000 three-year grant from the W. K. Kellogg Foundation for development of its post-graduate education program.

Dental Education—Aptitude tests will be required of nearly all applicants to schools of dentistry under a program announced April 2 by the American Dental Association. Forty of the nation's 41 dental schools have asked to be included in the program, designed to serve as an aid in selecting the best qualified and most promising students among the applicants, according to Dr. Shailer Peterson, secretary of the A.D.A. Council on Dental Education. Of an estimated 12,000 persons expected to file applications for admittance to dental schools next year, it is expected some 8,000 will take the aptitude tests. Of these, freshman classes can accept about 3,150 students.—Public H. Econ.

News Letter—At the request of the U.S.A. Department of State, the American Dental Association is now supplying material for that department's Dental Newsletter, which began publication in March and is currently being distributed on an international basis.

The Massachusetts Dentists are fighting law allowing hygienists to fill children's teeth under supervision of a registered dentist in a dispensary or clinic approved by the state commissioner of

public health. One of the first acts of a special committee of the Massachusetts Dental Society set up to lead a drive for repeal was to send a letter to all members of the legislature warning that "unqualified personnel are being permitted to toy with our most precious asset, the health of our children." The hygienist course providing the training in restorative work is being set up at Forsyth Dental Infirmary in Boston as a federally-financed Department of Public Health research program.

The saddest predicament that any one can get into is to admit that he is too busy to improve his methods.—J. Ogden Armour.

IN MEMORIAM

Warren C. Oxner of Halifax, Nova Scotia, aged 72, died suddenly on June 7. He was stricken at his office and died a short time later.

He was graduated from the Baltimore College of Dental Surgeons in 1902 and began practice in Halifax the same year. He was a past president of the Nova Scotia Dental Association and of the Halifax Dental Society. For a number of years he was associated with the Faculty of Dentistry at Dalhousie University, acting as clinical demonstrator and Professor of Crown and Bridgework.

A member of the Provincial Dental Board in 1935 he was elected delegate from Nova Scotia to the Dominion Dental Council. Since that time he has been a member of that body, and served one term as president.

Since 1944 he held the position of editor for Nova Scotia of the *Journal of the Canadian Dental Association*.

Dr. Oxner is survived by his widow, a daughter, one son, one sister and several grandchildren.

J. J. Kerr of Cobourg, Ontario, aged 91, died May 13. He was graduated from the Royal College of Dental Surgeons of Ontario in 1889. He had practised in Cobourg for fifty-five years retiring five years ago.

Dr. Kerr is survived by his widow and a daughter.

Franklin Homer Moore of Victoria, B.C. died April 13. He was graduated from the University of Toronto in 1909.

Doctor Moore was a member of the Scottish Rite A.F. and A.M. and was held in high esteem by all who knew him.

William Guy, F.R.C.S., L.R.C.P., L.D.S.E. former principal of Edinburgh Dental Hospital and School died May 28.

Dr. Guy was a world figure in Dentistry. In 1926 the University of Pennsylvania conferred on him the degree of LL.D. He was a Fellow of the Royal Society of Edinburgh and of the International College of Dentists. He was an honorary member of L'Association Générale des Dentists de France, La Société de L'Ecole et du Dispensaire de Paris and of the Odonto-Chirurgical Society of Scotland. He held many posts of honour in his own country and received the Fellowship of Dental Surgery of the Royal College of Surgeons of England.

Dr. Guy translated many poems from the French and wrote occasional verse. His culture, learning and influence being world-famed reflected not only on the school of which he was the head but upon all those with whom he came in contact.—Condensed from article in The Scotsman by Dr. J. Menzies Campbell of Glasgow.

Charles Heavysege Walsh of Winnipeg, Manitoba, aged 83, died May 31. He was graduated from Northwestern University in 1900 and practised in Winnipeg until his retirement six years ago. He was elected to the Board of the Manitoba Dental Association in 1906 and was made secretary the same year, a position he held for four years. He was President of the Canadian Foundation for Preventive Dentistry for several years and later treasurer of that organization.

Dr. Walsh is survived by three nephews and four nieces.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

JUILLET, 1950

No 7

Anesthésie générale au service du chirurgien-dentiste*

par LEO RATELLE, D.D.S., Roberval

La chirurgie dentaire, par ses privilèges, offre à chacun d'entre-nous, des horizons presque illimités. Il n'en tient qu'à nous de nous en rendre dignes et de les pratiquer. De cette façon, nous serons considérés comme faisant réellement partie d'un monde médical, dans lequel, médecins et dentistes peuvent échanger des services, de part et d'autre, pour le plus grand bien de l'humanité.

N'avons-nous jamais entendu certains confrères émettent l'opinion suivante: "Vous savez, c'est dangereux pratiquer l'anesthésie générale; le patient peut mourir." Je comprends, pour les avoir expérimentés moi-même, cette attitude et ce sentiment, qui inspirent à la fois et la crainte et la prudence envers tout ce qui sort de la routine ordinaire. La prudence est une grande vertu, qui perd son cachet, dès qu'elle sombre dans le pessimisme. Si, en vérité, les anesthésiques constituaient un réel danger de mort, personne, pour quelque raison que ce soit, ne pourrait les administrer sur des êtres humains, car c'est un principe divin qu'il n'est jamais permis d'attenter à la vie de ses semblables.

Lorsque vous montez en train, en avion ou en taxi, vous confiez au pilote ou au chauffeur votre vie, et pourtant Dieu sait combien il y a d'accidents fatals par ces moyens de transport. Que ce

soit là, une erreur de jugement ou une défectuosité de la machine, il y a mort d'homme. Est-ce que pour cela, vous dites que c'est dangereux de vous servir des moyens de transport publics? N'est-il pas vrai que la personne, qui en fait usage peut fort bien y laisser sa peau? Non, mais vous direz tout simplement, que les services de transport publics sont absolument nécessaires au bon fonctionnement de la vie économique d'un peuple, et que, de plus, ils offrent une très grande sécurité, car le pourcentage des accidents n'est qu'une petite fraction, en comparaison du nombre de milles parcourus.

Il en est de même pour l'anesthésie générale; celle-ci rend des services extraordinaires à l'humanité souffrante et le pourcentage de décès est considéré à peu près comme nul pour le nombre fabuleux d'anesthésies, qui se pratiquent dans le monde entier. Et encore, peut-on prouver, hors de tout doute, que la responsabilité de ces accidents soit bien imputable à l'anesthésie? L'être humain peut mourir de mille et une manières. Il suffit de feuilleter un traité de pathologie pour s'en rendre compte. Et malheureusement, l'évènement peut survenir au cours d'une anesthésie, sans qu'il soit humainement possible de le prévoir. Excepté le cas fortuit, je persiste à croire en la sécurité qu'offre l'anesthésie générale, et

*Communication présentée au Congrès annuel de la Société Dentaire de Montréal, à Montréal, le 2 juin 1950.

je considère de mon devoir de vous la présenter comme l'héritage le plus digne, le plus noble et le plus grand qu'un Crawford Long, un Horace Wells et un W. T. Morton pouvaient transmettre à notre belle profession.

Le but de l'anesthésie générale est de supprimer la douleur pendant les interventions chirurgicales.

L'étude de la douleur réelle favorise l'intelligence de l'anesthésie; aussi je vais m'inspirer du traité de la douleur du Professeur Le Riche pour faire revivre dans vos imaginations, de vieux souvenirs. Ce qu'est la douleur et ce qu'elle n'est pas?

"Pour le physiologiste, la douleur apparaît comme un sens particulier, ayant des récepteurs spéciaux, des excitants spécifiques, des voies de conduction propres.

Pour le praticien, au contact des malades, elle n'est qu'un symptôme contingent, ennuyeux, bruyant, pénible, difficile souvent à supprimer et qui, le plus habituellement, n'a pas grande valeur, ni pour le diagnostic ni pour le pronostic. Le nombre est infime des maladies qu'elle révèle et souvent, quand elle les accompagne, elle ne sert qu'à nous tromper. Par contre, dans certains états chroniques, elle paraît être toute la maladie, qui, sans elle, n'existerait pas.

Pour certains médecins, la douleur est une réaction de défense, un heureux avertissement; elle nous met en garde contre les dangers de la maladie, elle est utile, voire même nécessaire. D'autres, plus hardis, vont jusqu'à prétendre que si la douleur n'existait pas, il aurait fallu l'inventer."

Dans une conférence, en la chaire de médecine de France, le Professeur Le Riche qualifiait de "méprise regrettable" la compréhension que certains médecins avaient de la douleur.

Et le savant continuait "La douleur, une réaction de défense? Un heureux avertissement? Mais en fait, la plupart des maladies, et les plus graves, s'installent en nous sans crier gare. Presque toujours, la maladie est un drame en deux actes, dont le premier, sournois, se joue dans le morne silence de nos tissus, toutes lumières éteintes. Quand la

douleur arrive, on en est presque toujours au second acte, il est trop tard. Le dénouement est déjà en puissance, il est imminent. La douleur n'a fait que rendre plus pénible et plus triste une situation depuis longtemps perdue.

Réaction de défense? Mais contre qui? Contre quoi? Contre le cancer, qui ne fait mal d'habitude qu'au moment où il tue? Contre la tuberculose, qui, presque jamais, ne fait souffrir au moment où il serait encore temps? Contre les cardiopathies, qui, toujours, cheminent silencieusement? Contre l'ulcère de l'estomac, alors que l'ulcèreux, qui perfore son ulcère, n'a jamais souffert avant d'être menacé de péritonite? Si la nature avait souci de nous, si elle avait les attention qu'on lui prête, ce n'est pas quand un calcul du rein ne peut plus partir par les voies naturelles, qu'elle nous avertirait, mais au moment où il n'est que poussière et pourrait aisément s'en aller.

Les philosophes et les poètes ont imposé aux hommes, une idée très inexacte de la douleur. Oublieux de tous les cris déchirants, qui ont rempli de tristesse les mondes et les siècles, ils n'ont cessé de nous répéter, que la douleur est un bienfait dans l'ordre moral. Ils ont tellement insisté en brochant sur des thèmes stoïciens, que nous avons presque fini par les croire. Et malgré l'immensité de la douleur, qui depuis le commencement du monde ne cesse de faire souffrir les hommes dans leur chair, ceux d'entr'eux, qui n'ont pas encore souffert, ne soupçonnent rien de l'infinie profondeur de la souffrance humaine. N'oublions pas que pour celui qui souffre, la douleur est une rançon terrible de la perfection acquise d'un de nos sens. Toujours inutile, elle appauvrit l'homme. En peu de temps, elle fait de l'esprit le plus lumineux, un être traqué, replié sur lui-même, concentré sur son mal, égoïstement indifférent à tout et à tous, constamment obsédé par la crainte des retours douloureux.

Il faut donc abandonner l'idée fausse de la douleur bienfaisante. De fait, la douleur est toujours un sinistre cadeau, qui diminue l'homme, le rend plus malade qu'il ne serait, sans elle, et le devoir strict du praticien est de s'efforcer toujours de la supprimer, s'il le peut."

Est-il en notre pouvoir de supprimer la douleur?

Permettez que nous jetions ensemble les yeux sur le chirurgien-dentiste et voyons s'il possède les qualités nécessaires à l'administration de l'anesthésie générale? Le chirurgien-dentiste a-t-il le droit de pratiquer l'anesthésie générale? Le diplôme de Docteur en Chirurgie dentaire confère au récipiendaire le droit de jouir des droits et privilèges, qui y sont attachés par la loi. Quant à la license, elle confère au Docteur le droit d'exercer la Chirurgie dentaire dans cette Province, avec les privilèges que la Loi attache à ce droit.

Que dit la loi dentaire du Québec? Le chirurgien-dentiste, légalement reconnu et dûment enregistré, a le droit d'avoir en sa possession, de manipuler ou d'administrer les remèdes, les drogues, les poisons, enfin tout ce qui est nécessaire à l'exercice de sa profession. Après avoir établi que le chirurgien-dentiste peut administrer l'anesthésie générale, la question suivante s'impose. A-t-il le droit de l'administrer seul? Il n'y a rien dans la loi, qui traite de ce sujet et par conséquent rien n'empêche le dentiste de l'administrer seul. Cependant, je partage entièrement l'opinion des commentateurs à ce sujet, à savoir: "Qu'il n'est pas bon que l'opérateur soit anesthésiste en même temps".

Avez-vous besoin d'un anesthésiste? Sur qui s'arrêtera votre choix? Serait-ce sur un médecin ou sur un dentiste? Ma préférence ira au confrère plus tôt qu'au médecin et voici pourquoi.

J'ai le privilège de jouir gratuitement de la coopération d'un confrère en Chirurgie dentaire, et dans les situations difficiles, celui-ci vient à mon secours, partage mes difficultés et m'aide à surmonter les obstacles d'autant plus facilement que lui-même, de par sa profession, s'est déjà trouvé dans des circonstances analogues. C'est pourquoi, la coopération d'un confrère en chirurgie dentaire est de beaucoup supérieure à celle du meilleur médecin non spécialisé en anesthésie, ni en chirurgie dentaire, malgré toute sa bonne volonté.

Le patient, doit-il avoir le choix de

l'anesthésiste? Non ce choix est à la discrétion du chirurgien. Le patient peut-il inviter son médecin ou sa garde-malade à assister pendant le cours de l'intervention? Je n'y vois aucun inconvénient, ni aucune objection. La vie du patient est-elle mieux protégée par le médecin ou le dentiste anesthésiste? La vie du patient est aussi en sécurité, si elle est confiée au soin d'un dentiste-anesthésiste qu'à un médecin, car tous deux ont des connaissances identiques sur ce sujet. Il reste donc que l'anesthésie demeure une question d'habileté, de technique et de doigté de la part du praticien.

Qui croyez-vous, du médecin ou du dentiste, a le plus d'habileté, lorsqu'il est question d'anesthésie de générale pour des interventions d'ordre de chirurgie dentaire?

N'est-ce pas le dentiste-anesthésiste, qui vit et ressent en lui-même toutes les phases du travail de l'opérateur? Ne peut-il pas administrer une anesthésie plus choisie pour le besoin du chirurgien et, de ce fait, plus pratique et plus salubre pour le patient, ayant toujours à l'esprit, que la durée du sommeil doit cesser le plus tôt possible après l'intervention.

Après avoir constaté que le dentiste-anesthésiste l'emporte sur son confrère, le médecin non spécialisé, nous allons, avec les yeux de l'anesthésiste, aborder l'étude de la classification des patients ainsi que des anesthésiques.

Sachant que l'anesthésie est une intoxication dosée, qui plonge le patient dans un état pathologique, qui ressemble au sommeil physiologique, avec perte de connaissance et de sensibilité, l'anesthésiste doit établir, en tout premier lieu, et aussi approximativement que possible, la valeur des organes qui président à la vie de son patient, à savoir: le cœur et les vaisseaux, les poumons et les reins. Cet examen lui permet de classer le patient et le guide pour le choix de l'anesthésique. Le choix final de l'anesthésique aura lieu seulement lorsque l'anesthésiste sera informé par le chirurgien de la profondeur et la durée du sommeil requis.

L'étude de la classification des patients

devient plus intéressante, si on la fait en parallèle aux anesthésiques.

Ainsi, les patients, dits normaux, sont ceux dont les organes fonctionnent normalement; ces gens sont aptes à recevoir tous les anesthésiques.

Les cardiaques sont des gens dont le coeur souffre de diverses lésions organiques ou d'irrégularités dans le rythme. A l'auscultation, le praticien entend les souffles aux différents foyers et peut se faire une très bonne idée de la valeur et de l'importance de la lésion.

S'agit-il d'une lésion compensée, le patient peut-il vaquer à ses occupations ordinaires sans éprouver de fatigue anormale, vous apprend-il le besoin qu'il ressent d'aller prendre sa marche quotidienne, ou bien vous dit-il n'y a rien de mieux qu'une bonne partie de golf, pour vous garder en forme? En évitant tout effort violent, ce cardiaque peut faire une vie normale tout en ayant un souffle systolique au foyer mitral. Dans ces conditions, nous pouvons pratiquer l'anesthésie générale avec les différents anesthésiques, mais il serait avisé de se servir de beaucoup d'oxygène et surtout d'éther, comme stimulant cardiaque.

D'un autre côté, si le muscle cardiaque perd de son énergie, on dit qu'il y a décompensation et l'on voit apparaître tous les troubles qu'apporte la gêne d'une circulation au ralenti. Ces principaux troubles sont: la dyspnée d'effort, l'asthme cardiaque et l'enfartus pulmonaire pour la petite circulation; pour la grande circulation, vous avez le phénomène de l'oédème fugace, la congestion de tous les viscères, qui deviennent sensibles à la palpation ou à la pression (foie cardiaque) et le tout se termine par le l'anasarque (infiltration de sérosité dans les tissus cellulaires). Chez ces cardiaques, il n'y a pas d'anesthésie générale à servir; car ce sont des candidats s'acheminant vers la mort par asphyxie.

Il nous reste à considérer l'arythmie d'origine spasmodique. Vous trouverez à la compression de la radiale, un battement tout à fait irrégulier, tantôt rapide, tantôt intermittent, et souvent l'intensité est telle que vous avez de la difficulté à

compter le nombre de pulsations. Dans ces conditions, mieux vaut régulariser le rythme en prescrivant de 15 à 30 gouttes de digitaline. Vous pourrez alors administrer l'anesthésie générale avec les anesthésiques usuels, en ajoutant l'oxygène et un peu d'éther. Autrement vous exposez votre patient à la syncope cardiaque, qui a lieu au début de l'anesthésie et qui est causée par l'irritation du centre vago-sympathique; cette irritation se traduit souvent par un spasme qui contracte le coeur, et qui ne cède souvent qu'avec la mort.

Avant de traiter des rénaux, mentionnons en passant les artério-scléreux. Il est intéressant de noter l'état caoutchouté de la paroi des vaisseaux et de voir sur la tempe des petites bosses, ressemblant à des grains de chapelet. On rencontre cette maladie surtout chez les hommes, grands fumeurs et alcooliques. Certains auteurs font remarquer que l'on reconnaît l'âge de l'homme par l'état de ses vaisseaux. La sclérose ne s'intéresse pas seulement aux vaisseaux, mais peut s'étendre également à tous les organes.

Les rénaux se reconnaissent à l'oédème des paupières inférieures, ainsi qu'à la pression artérielle élevée. La maxima ou contraction systolique indique l'énergie que le coeur est obligé de déployer pour vaincre le barrage, tandis que la minima est la pression remarquée à la diastole. On dit que le pression est haute ou basse, selon la normale établie pour des sujets en santé, 120/80. Un fait intéressant à noter est la différentielle; si elle diminue, on dit qu'il y a pincement et le pronostic est sombre.

Avant d'entreprendre l'anesthésie chez ces malades, il est bon de connaître la perméabilité de leurs reins par une diète hydrique constituée de jus de fruits. Normalement les reins sécrètent environ 1500cc d'urine par 24 heures; celle-ci sera limpide et jaune citrin, si le patient est en santé; par contre si les reins sont congestionnés, on dit qu'il y a blocage. Le rein peut congestionner par infection microbienne, par les toxiques ou par les médicaments; dans ces conditions, les jus de fruits auront pour effet de décon-

gestionner les reins et vous verrez l'urine rare au début, brunâtre et chargée d'albumine redevenir, peu à peu, de plus en plus abondante et se clarifier. Ce sont les glomérules qui se décongestionnent et par ce phénomène, les tubes urinaires se décompriment et voilà que la diurèse revient normale et l'urine coule librement dans le bassin. A ce stage, le patient est prêt à supporter convenablement l'anesthésie; il serait opportun, dans ces cas, de faire un usage très modéré de chloroforme.

Le nombre de patients tuberculeux, qui se présentent tous les jours dans les cliniques dentaires, est tellement important qu'on ne peut le passer sous silence. Dans certains hôpitaux, devant le fait d'une recrudescence tuberculeuse, le bureau médical a exprimé le désir, que tout nouveau patient hospitalisé soit examiné au point de vue pulmonaire aux cliniques antituberculeuses, et qu'un rapport soit inclus au dossier, tout comme le Wasserman. C'est donc dire, que le chirurgien-dentiste doit se servir de tout son esprit d'observation pour chercher à dépister un T.B.

Les symptômes objectifs sont: le faciès, la toux sèche ou grasse, les crachats muco-purulents ou arrondis en forme de monnaie, la décalcification marquée de toutes les dents et plus spécialement des dents déjà obturées, depuis environ six mois et plus, (cette décalcification d'un gris blanchâtre est-elle apparentée au milieu acidophile ou acidorésistant du B.K.), la température 98.4, 99'2, la radiographie et l'analyse des crachats. Si cette dernière est positive, le diagnostic est certain; si le résultat est négatif, ça ne veut rien dire, nous devons avoir les épreuves de trois analyses à résultat négatif, avec prélèvements à temps différents pour être moralement certains que le patient est sain du côté pulmonaire.

Les symptômes, subjectifs sont: les antécédents, les contacts, la sensation d'être toujours fatigué et enfin la transpiration au cours de la nuit.

Si je me suis attardé sur cette maladie, c'est pour mieux démontrer que ces malades, une fois anesthésiés, devront faire

la cure, c'est à dire le repos complet pendant plusieurs jours, jusqu'à ce que la température entre dans les cadres de la normale, autrement vous exposez le patient à réactiver ses vieux foyers et de négatif qu'il était, à redevenir positif et semer partout le B.K. Il est préférable d'anesthésier ces malades au Protoxyde, Cyclopropane ou au Penthotal; il ne faut jamais se servir d'éther.

Les anémiques, les enfants en bas âge et les personnes âgées ont besoin pour vivre de beaucoup d'oxygène; l'anesthésiste devra s'en souvenir, s'il se sert du protoxyde ou du cyclo.

Les alcooliques et les athlètes doivent être anesthésiés de préférence à l'hôpital. Une journée au petit jus de citron les amortit quelque peu et en leur collant une prémédication de base, nous préparons un sommeil beaucoup plus calme. Comme prémédication de base, nous avons le choix suivant: morphine $\frac{1}{4}$ gr, atropine 1/150; morphine $\frac{1}{4}$ gr. et spartéine $\frac{1}{4}$; enfin morphine 1/6 gr. et scopalamine 1/150. Le nembutal agit assez bien dans ces cas; l'ennui de ce médicament est que nous n'avons pas toujours l'effet désiré et très souvent le malade devient énervé et agité. Le Penthotal, 50 cgrm par 150 lbs, plonge rapidement ces malades dans la période d'anesthésie; vous pouvez continuer ensuite au protoxyde et à l'éther, au mélange, au cyclo et à l'éther pur en circuit fermé. Vous pouvez être certain que ces malades ne dorment pas au protoxyde pur. Les alcooliques sont des résistants aux anesthésiques, du fait qu'ils absorbent de très grandes quantités d'alcool avant de perdre totalement la raison; c'est pourquoi, chez ces patients, l'anesthésiste fait appel aux puissants anesthésiques, pour vaincre la résistance et pouvoir les faire dormir convenablement.

Enfin la classification se termine par les intoxiqués au monoxyde de carbone. Je veux parler de ces gens, qui assimilent le monoxyde, à petite quantité, depuis nombre d'années, comme les forgerons, les garagistes-mécaniciens, les chauffeurs de fournaies ou de bouilloires, etc. . . . Il vaut mieux passer ces gens à l'hôpital, car ils présentent la même résistance que

les alcooliques à l'anesthésie; ils ont de plus, une particularité que les alcooliques n'ont pas; c'est que souvent ils sont réfractaires aux anesthésiques, dès qu'on entre dans la phase de l'anesthésie, ces malades arrêtent de respirer et cyanosent; par contre, ils tolèrent très bien l'éther avec un riche pourcentage d'oxygène.

Un mot sur les femmes enceintes, grandes nerveuses, qui manifestent toutes sortes de crainte; elles peuvent être calmées par les paroles encourageantes de l'anesthésiste ainsi que par la prémédication d'une coramine, dans laquelle vous laissez dissoudre 1/6 gr. de morphine. Au bout d'une vingtaine de minutes, la coramine permet une respiration plus facile et la morphine empêche l'utérus de se contracter. On procède alors à l'anesthésie de la manière habituelle.

Toutefois, il faut se rappeler l'anoxémie du fœtus et de ce fait donner à la mère un riche % d'oxygène. Le fœtus, dans le sein de la mère, reçoit son oxygène par le sang de la maman; il est reconnu que le sang maternel contient plus d'oxygène que le sang, qui traverse le placenta; par conséquent le sang du fœtus est toujours moins oxydé que celui de la mère. Dans l'anesthésie, si vous faites cyanoser la maman, vous allez créer l'anoxémie du fœtus et il peut en résulter des conséquences fâcheuses pour lui. Il sera important que cette anesthésie soit d'aussi courte durée que possible. Peut-on anesthésier les femmes enceintes? Oui, quand il y a nécessité. Si la future maman a la bouche remplie de pus avec des dents infectées et absédées; c'est le plus grand service que vous pouvez lui rendre. Vous lui permettez de se désintoxiquer avant l'accouchement et elle sera, en temps opportun, en mesure de se défendre, de désister aux infections, qui peuvent survenir après l'accouchement, telles les fièvres puerpérales, les phlébites, etc., etc.

L'ennui d'une prémédication de base dans nos cliniques rend le patient souvent inapte à retourner chez lui par ses propres moyens, à moins qu'il ne soit accompagné d'une personne responsable.

Les principales médications de base

sont, les barbituriques et les sédatifs suivants: nembutal, allonal, gardénal, véronal, sonéryl, somnifène, Penthotal, morphine et ses dérivés.

Les principaux anesthésiques sont le chlorure d'éthyle, le chloroforme, l'éther, le Penthotal, le protoxyde et le cyclopropane.

La chlorure d'éthyle est le plus toxique de tous les anesthésiques, heureusement, son élimination est très rapide. On s'en sert avantageusement pour les interventions de très courte durée comme: l'ouverture d'un abcès, l'extraction d'une ou quelques dents temporaires ou encore comme induction pour le chloroforme ou l'éther.

Le processus physiologique, que l'on peut suivre chez le patient anesthésié, soit par le chloroforme, l'éther ou le cyclopropane est sensiblement le même.

Au début de l'anesthésie, vous avez la période d'excitation, plus ou moins longue, et quand votre patient commence à dormir, vous remarquez que son oeil se promène dans l'orbite avec une pupille plus ou moins dilatée, démontrant ainsi son intoxication, sa respiration devient forte et souvent bruyante.

Durant la deuxième période, petit à petit, l'oeil s'approche du centre, de grosses larmes coulent et la respiration diminue d'intensité.

A la troisième période, les larmes cessent, l'oeil est fixé au centre; la pupille est en myosis, si le patient a reçu une prémédication de base; sinon, elle est en midriase et vous pouvez encore la faire contracter au moyen d'un rayon lumineux dirigé dans l'oeil.

Cette phase est la période chirurgicale que l'on cherche à atteindre pour la plupart des interventions.

Il y a la quatrième période, qui n'est pas nécessaire en chirurgie dentaire, mais que certains genres d'intervention médico-chirurgicales requièrent. Dans ce cas, l'anesthésiste augmente le dosage jusqu'à ce que la pupille légèrement dilatée ne se contracte plus à la lumière. C'est le plus haut degré d'intoxication qui puisse être pratiqué; il va s'en dire que ce stage est le plus dangereux et demande beaucoup de prudence.

Le Penthotal est un médicament, composé d'une poudre (50 ctgm) et d'un liquide (10cc) ·eau distillée, que l'on mêle parfaitement avant de s'en servir. Il s'administre en injection intraveineuse, en petite quantité, pendant que le patient compte. Dès qu'il cesse de compter, on surveille la période d'apnée, qui dure environ une minute à une minute et demie, pendant laquelle on cesse l'administration de l'anesthésie. Il est nécessaire que la tête du malade soit tirée à l'arrière pour permettre le libre passage de l'air dans la trachée; dès que la respiration reprend, on continue l'injection. Quand la quantité de Penthotal est épuisée (ne jamais dépasser 1 gramme) et que le patient ne dort pas suffisamment, on doit lui substituer un autre anesthésique. Cette médication peut rendre service en chirurgie dentaire, comme anesthésique d'induction, pour les alcooliques et annule la période d'excitation; de plus elle nous permet l'éthérification.

Je tiens à signaler, cependant, les faits suivants:

—Il n'y a pas moyen de connaître l'intensité du sommeil obtenu, autrement que par l'observation du relâchement du tonus musculaire.

—Le Penthotal exige une prémédication de base, environ trente minutes avant l'intervention; c'est un hypotenseur et, par conséquent dépressur pour ceux qui souffrent de basse pression.

—Il faut avoir, à portée de la main, tout ce qui est nécessaire à l'intubation, pour éviter l'asphyxie causée par l'oédème de la glotte;

—Enfin le réflexe laryngé n'est pas aboli.

Le cyclo est un anesthésique très puissant; il est de plus très explosif et la moindre étincelle peut faire sauter la salle. Aussi on l'administre en circuit fermé, en doublant ou triplant la quantité d'oxygène pour chaque partie de cyclo.

Le protoxyde d'azote est l'anesthésique par excellence et on s'en sert dans 85% de tous les cas de chirurgie dentaire. Aussi est-il bien connu de tous les dentistes, pour les avantages qu'il procure: sommeil rapide, contrôle absolu du degré d'intoxication et un prompt réveil, qui permet au patient de retourner chez-lui

environ vingt minutes après l'anesthésie. Il requiert de la part de l'anesthésiste, une très bonne perception des couleurs ainsi qu'une grande habileté.

Le N20 s'administre sous pression, à l'aide d'une machine, dans les proportions de 15 pour 1 à 5 pour 1, et nous pouvons observer les quatre phases d'anesthésie suivantes:

I—Induction: le patient réagit un peu, c'est la période d'excitation qui dure environ vingt secondes:

II—Début de l'anesthésie: l'oeil se promène, pleure et s'immobilise d'un coté ou de l'autre de l'orbite.

III—Anesthésie proprement dite: l'oeil se fixe au centre et ne pleure plus.

IV—Anesthésie profonde et dangereuse: la pupille fixée au centre se dilate et la figure est cyanose. Il ne faut jamais atteindre cette phase, car la vie du patient est en danger.

Nous pouvons avantageusement associer l'éther au N20, et nous verrons apparaître les phénomènes énumérés plus haut, en parlant de l'administration du chloroforme, de l'éther et du cyclopropane.

Cette association est particulièrement désirable pour l'anesthésie des patients anémiques et des enfants, dont le seuil anesthésique permet difficilement l'emploi du protoxyde oxygéné seul. Et voici pourquoi: chez ces patients, il vous est impossible de fixer un % d'oxygénation, ou il sera trop faible et amènera la cyanose, ou il sera trop élevé et vous aurez agitation et réveil.

L'anesthésiste ne doit pas être l'esclave d'un anesthésique ou d'une technique, mais il doit pouvoir être assez subtil pour employer la méthode la mieux appropriée, et savoir se plier aux circonstances afin d'atteindre pleinement le but, qu'il se propose.

Il convient de faire revivre, au chapitre de l'anesthésie, une méthode, que nous utilisons, très souvent, avec des résultats merveilleux. Reléguée aux oubliettes, elle mérite pourtant mieux que le sort, qui lui est fait par le monde médical.

L'intubation, voilà la manière idéale d'administrer l'anesthésie générale, en

chirurgie dentaire. Tout en laissant à l'opérateur un plus grand champ opératoire, elle permet une étanchéité totale de la gorge; y a-t-il des fragments, des racines, des esquilles à enlever, ou bien un foyer d'ostéite à cureter, vous avez pour vous le facteur sécurité par excellence. Cette méthode est très versatile; elle s'applique aussi bien aux alcooliques qu'elle convient aux jeunes enfants. Je la préconise, de plus, pour toutes les interventions de chirurgie buccale et plus spécialement pour celles de longue durée. Elle ne requiert, de la part de l'anesthésiste, qu'un peu d'habileté, facilement acquise à la suite de quelques essais.

L'instrumentation suivante est nécessaire pour l'intubation:

- canules intra-trachéales numéros 1 à 8;
- un laryngoscope;
- une pince longue à préhension (amygdales);
- un aspirateur;
- un tube de Lubri-Septol de Hartz;
- un récipient contenant l'anesthésique de votre choix, moins le Penthotal, va s'en dire;
- un ouvre-bouche.

Avant de terminer cet exposé, je vous rappellerai certaines complications ennuyeuses, susceptibles de se produire en cours d'anesthésie et vous exposerai la façon d'y remédier le plus efficacement possible.

Arrêt de la respiration au début de l'anesthésie:

a) Le patient a pleine conscience et ne veut pas respirer; dans ce cas, on recommence l'induction au N₂O, ou bien on suspend temporairement l'anesthésie à la goutte, jusqu'à ce le patient respire à nouveau.

b) Le patient est inconscient et rosé dans l'administration du N₂O; ceci veut dire qu'il y a trop d'oxygène au mélange et l'arrêt est purement fonctionnel. S'il y a plutôt inconscience et cyanose, vous avez soit une obstruction des voies respiratoires, soit un spasme de la glotte: dans le premier cas, vous devez dégager l'obstruction pour permettre à l'oxygène de ventiler le poumon, et au besoin pratiquer les manœuvres de Sylvester; dans le second cas, vous serez heureux d'avoir,

sous la main, un tube à glisser dans la trachée et éviter ainsi la mort par asphyxie.

Si votre malade transpire beaucoup, tout en demeurant rosé avec un pouls bien frappé, rien n'indique ici que votre patient fatigue, car même normalement, à vous comme à moi, il arrive de transpirer sans que nous nous sentions fatigués.

Si, au contraire, la transpiration coïncide avec un teint pâle, méfiez-vous, surveillez la respiration et le pouls; celui-ci est-il fuyant, celle-là diminue-t-elle, votre patient manifeste alors des signes de fatigue. Oxygénez immédiatement, et prenez la tension artérielle; si elle se lit par 90/55, le cœur flanche et une injection de méthédrine (7½ gr.) est toute indiquée. Après cinq minutes, reprenez votre tension artérielle; vous aurez peut-être 150/95 et vous constatarez que votre patient se comporte bien, sa respiration est régulière et il semble avoir retrouvé ses couleurs.

La méthédrine ne s'injecte que lorsque la pression est très basse; autrement il y a danger de rupturer des vaisseaux et on pourrait avoir une hémorragie cérébrale.

Vous trouverez des gens, qui ont une période d'excitation post-opératoire à l'anesthésie; ces patients manifestent un tremblement de tout le corps, comme un frisson souvent accompagné d'un claquement des dents; si ce tremblement est léger, le simple fait de faire reposer le patient calmera les secousses, au contraire, si le tremblement est tellement intense, que le patient en saute dans le lit, une injection de ¼ gr. de morphine l'apaisera immédiatement.

Chez certaines personnes, le jeûne matinal provoque des nausées au tout début ou à la fin de l'anesthésie. S'il y a vomissements, vous constaterez que le liquide rejeté est de couleur jaunâtre; c'est le suc gastrique. Ce liquide, absolument nécessaire à la digestion, s'accumule dans l'estomac à l'heure des repas. Le pylore, ce fidèle gardien de l'intestin, ne s'ouvre que pour laisser passer le bol alimentaire: comme résultat, le suc gastrique, laissé seul par le jeûne forcé, fait figure d'intrus, par suite d'un phénomène purement

physiologique, sous l'action d'un anesthésique, l'estomac rejette ce corps devenu étranger, tout comme le liquide qu'un patient imprudent aurait bu avant de se faire anesthésier.

Au réveil, il arrive parfois, que ces contractions stomacales soient si violentes, que le patient sent le besoin de prendre la pose caractéristique des deux bras croisés sur l'abdomen et se plie en deux: le repos au lit et un sac d'eau chaude sur l'estomac auront raison de ces contractions dans un délai relativement court.

Une autre catégorie de patients présente à réveil une lassitude très grande; ce sont habituellement des femmes ou des jeunes filles anémiques avec des bouches particulièrement infectées. Elles craignent de se faire enlever les dents et durant des semaines, elles endurent des douleurs suffisantes pour couper le sommeil et l'appétit; un bon matin, après un effort surhumain, elles vous arrivent pour une extraction totale. Dans ces conditions, une injection de coramine, dès le

début de l'anesthésie, donne de la vigueur au patient et lui permet de se trouver moins accablé au réveil.

Enfin un mot des pseudo-hystériques. Ces femmes présentent au réveil une immobilité absolue, qui vous porte à croire qu'elles dorment encore; vous prenez la pulsation: normale; vous examinez la pupille: normale; vous écoutez la respiration, normale; vous appelez par leur nom: silence ou plainte, parfois elles vous diront qu'elle ne voit plus. Ces femmes jouent la comédie pour impressionner le mari, qui attend dans l'antichambre et pour obtenir de lui promesses, bijoux, que sais-je encore. Vos doigts sauront trouver les endroits sensibles de la bouche, qui provoqueront la douleur nécessaire pour faire sortir madame de son état pseudo-hystérique. Examinez bien la scène, quand monsieur viendra voir son épouse dans la clinique: attentions toutes spéciales et délicates envers madame, cajoleries et chuchotements mystérieux après lesquels madame soupirait peut-être depuis longtemps.

Nouvelle technique simplifiée pour le blocage et le déblocage instantanés dans les fractures des mâchoires

par MAURICE BOUYSSOU, Dr. Méd. Stom. et HENRI CADENAT, Int. Hôpitaux

On sait que le traitement des fractures des mâchoires par la contention intermaxillaire se fait aujourd'hui presque universellement avec des ligatures ou des arcs de divers genres: boucles d'Ivy, fice-lage continu de Stout "en points de machine à coudre", arcs filetés, arcs festonnés ou crénelés (types Jelenko, Winter, etc.), arc à bouclettes de M. Dechaume.

Ces procédés ont fait maintes fois leurs preuves; ils ont rendu de tels services qu'il serait vraiment déplacé d'en contester la valeur constamment éprouvée.

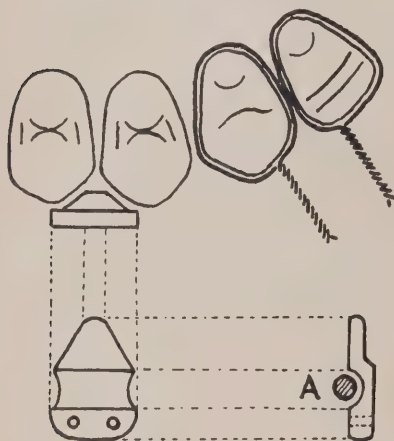
Cependant, on a déjà fait remarquer

parfois que les arcs semi-rigides finissaient par avoir un certain "jeu", qu'ils avaient tendance à se retourner quelque peu sous la traction des anses intermaxillaires. De même, les ligatures se relâchent souvent au bout de quelques jours et ne peuvent pas toujours rester en place, notamment sur les incisives et canines inférieures. On constate aussi que les boucles s'enfouissent parfois dans le tissu gingival et l'on a quelque peine à les retrouver pour y passer les anses de blocage ou les fils destinés à y attacher des élastiques; de toutes façons, la mise en place ou la suppression des anses de

blocage demande un certain temps et une attention soutenue. Enfin, les boucles sont quelquefois cisailées et sectionnées par les fils métalliques intermaxillaires.

C'est la raison pour laquelle des tentatives ont déjà été faites pour trouver des moyens de blocage plus sûrs ou plus commodes. Ce furent tour à tour:

a) Le système de Harper, dit "cotter key", dans lequel une tige métallique ou "clef", portant les anses intermaxillaires, était introduite horizontalement dans plusieurs boucles contiguës, ou retirée de



D'MB

FIG. 1

la même manière pour interrompre le blocage.

b) Les boutons de Kazanjian, qui réunissaient les ligatures cervicales de deux dents voisines en une grosse torsade, puis la repliait sur elle-même de manière à former un "bouton" volumineux sur lequel s'accrochaient les anses intermaxillaires.

c) Les coquilles métalliques de Woodward, en forme de "clam" à deux valves, enfermant la torsade de la ligature cervicale et supportant par simple accrochage les anses intermaxillaires.

Nous avons pensé qu'il était possible de construire des boutons en métal ou en résine acrylique d'un modèle très simple, permettant d'obtenir à la fois une fixité et une résistance considérables, une grande facilité de manipulations et la possibilité d'associer ces éléments isolés à un arc lorsque la contention des fragments dans le sens vestibulo-lingual serait nécessaire.

La forme de ces boutons (fig. 1) permet d'accrocher à chacun d'eux plusieurs anses de traction élastique. Les détails de leur mise en place sont indiqués dans la figure 2, qui montre les deux possibilités de leur utilisation, soit comme éléments isolés, soit comme éléments fixes associés à un arc; ce dernier est indépendant et ne supporte lui-même aucune traction directe: il ne risque donc pas de se relâcher.

On peut ainsi bloquer ou débloquer instantanément les maxillaires sans avoir à passer ou à retirer des fils au niveau du ficelage basal (menace de vomissements, nécessité d'extraire une dent ou de nettoyer la bouche, etc.).

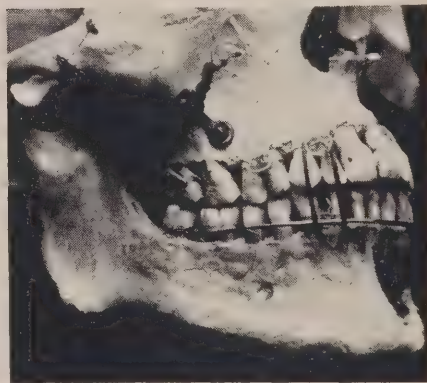


FIG. 2

En haut, montage de boutons isolés—En bas, montage des mêmes boutons combinés avec un arc (voir fig. 1)—Les anses intermaxillaires sont simplement accrochées aux boutons, permettant un blocage ou un déblocage instantanés.





PAGES EDITORIALES

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400 est Boul, S.-Joseph, Montréal

Réunion du Bureau des Gouverneurs de l'A.D.C.—1950

Chaque année, le Bureau des Gouverneurs de l'A.D.C., formé de l'Exécutif, des délégués de chaque province et des présidents de comités d'études, se réunit pour élaborer la politique de la profession dentaire canadienne sur des questions, qui concernent l'exercice de ses activités. Cette année, ces sessions professionnelles ont été tenues à Toronto durant les trois jours, qui ont précédé le Congrès National. Il est inutile, dans quelques lignes, de tenter de faire part à nos confrères de langue française des décisions prises au cours de cette réunion; d'ailleurs, tous les membres recevront une copie des délibérations.

Nous essaierons, dans cette page, de résumer aussi succinctement que possible, les résolutions adoptées par les Gouverneurs dans les domaines les plus importants de notre Association.

Comité des Finances: Il a été résolu à l'unanimité de constituer un fonds de réserve destiné à l'achat d'une propriété qui abritera les quartiers-généraux de l'A.D.C. Une option a été retenue sur un immeuble de Toronto et son acquisition s'effectuera, aussitôt que les Bureaux provinciaux auront donné leur sanction au projet et auront indiqué le montant de leur quote-part et la façon dont ils effectueront leurs versements. Un plan a été suggéré pour faciliter le financement de cette entreprise. Le montant de la cotisation annuelle des membres a été fixé à une somme fixe, en tenant compte du budget de l'Association pour l'avenir. Quelques provinces versent plus que cette somme; il a été décidé d'affecter le surplus à ce fonds d'immeuble.

Comité d'Assurance-Santé: Comme on le sait, ce Comité a présenté, l'an dernier, un projet d'assurance-santé dentaire pour la population du Canada au gouvernement fédéral et au Bureau des Gouverneurs, qui l'ont adopté. Cette année, quelques retouches de détail ont été faites à ce plan et toutes les formules, devant être utilisées, ont été rédigées et approuvées.

Pour rendre plus éclairé ce plan, l'A.D.C. déléguera, cet été, un observateur, en Nouvelle-Zélande, pour étudier sur place les modalités de l'organisation de ce pays dans ce domaine. De plus, ce délégué enquêtera sur la question des hygiénistes dentaires dans cette contrée.

Conseil d'Enseignement Dentaire: Ce comité a complété une enquête approfondie sur les programmes des études dans les facultés d'Universités canadiennes. Pour compléter cette étude, une équipe de spécialistes visitera chaque faculté durant l'année. Le but de ce travail est d'uniformiser, autant que faire se peut, la formation des dentistes canadiens, en tenant compte des facteurs locaux.

Le comité a, de plus, présenté des recommandations sur les questions d'internat dentaire, d'un bureau national d'examen, de cours pour les hygiénistes, de l'accréditation de dentistes étrangers, etc.

Comité du Journal: Malgré les recommandations des rédacteurs, le Bureau a décidé de ne pas augmenter le volume du Journal pour l'unique raison que les frais de publication sont presque prohibitifs et que le revenu provenant des annonces a une tendance à diminuer.

Comité des relations publiques: Ce comité a été des plus actifs, cette année, en fournissant des renseignements dentaires aux journalistes et aux rédacteurs de revues profanes. On note un intérêt plus grand, dans le public, pour les choses dentaires et de nombreux articles, traitant de ces problèmes ont été publiés dans plusieurs revues d'envergure au Canada. Ce comité, de plus, a réussi à organiser des transmissions radiophoniques d'un océan à l'autre, traitant de sujets dentaires, par l'intermédiaire de Radio-Canada.

Comité des Recherches: Un grand nombre de jeunes diplômés ont été aidés financièrement par ce Comité à poursuivre des recherches, tant aux Etats-Unis qu'ici.

Cette année, le Comité, a été consulté à diverses reprises par le gouvernement fédéral, au sujet de certains produits dentaires mis sur le marché à l'usage du public. Le Comité a présenté le rapport d'une enquête faite sur les recherches actuellement en cours au Canada.

Parmi les décisions d'intérêt général, soulignons l'admission de la province de Terre-Neuve au sein des membres corporatifs de l'Association et l'embauche du secrétaire à plein-temps.

Avant de clore ce compte-rendu, permettez-nous de vous signaler l'étude approfondie qui a été faite du problème du personnel dentaire au Canada. Les chiffres compilés par le secrétaire, montrent que le nombre des dentistes va en décroissant en rapport avec la population et que les Universités ne peuvent pas recevoir un nombre plus grand d'élèves. Ce problème est inquiétant, surtout si on songe qu'une grande proportion de dentistes canadiens dépasse cinquante ans. A tout prix, il faudra que les facultés dentaires augmentent leurs disponibilités, si le standard des services exigés par le public de la profession dentaire veut être maintenu au niveau actuel.

GERARD DE MONTIGNY



By Courtesy of "The Beaver"

*THIS BEAR CUB IS HAVING A FINE TIME
BATTING AROUND A WASP'S NEST
(Fortunately UNOCCUPIED at the time)*

The Wisdom of Honest Abe

"You cannot bring about prosperity by discouraging thrift."

"You cannot strengthen the weak by weakening the strong."

"You cannot help strong men by tearing down big men."

"You cannot help the wage earner by pulling down the wage payer."

"You cannot further the brotherhood of man by encouraging class hatred."

"You cannot help the poor by destroying the rich."

"You cannot establish sound security on borrowed money."

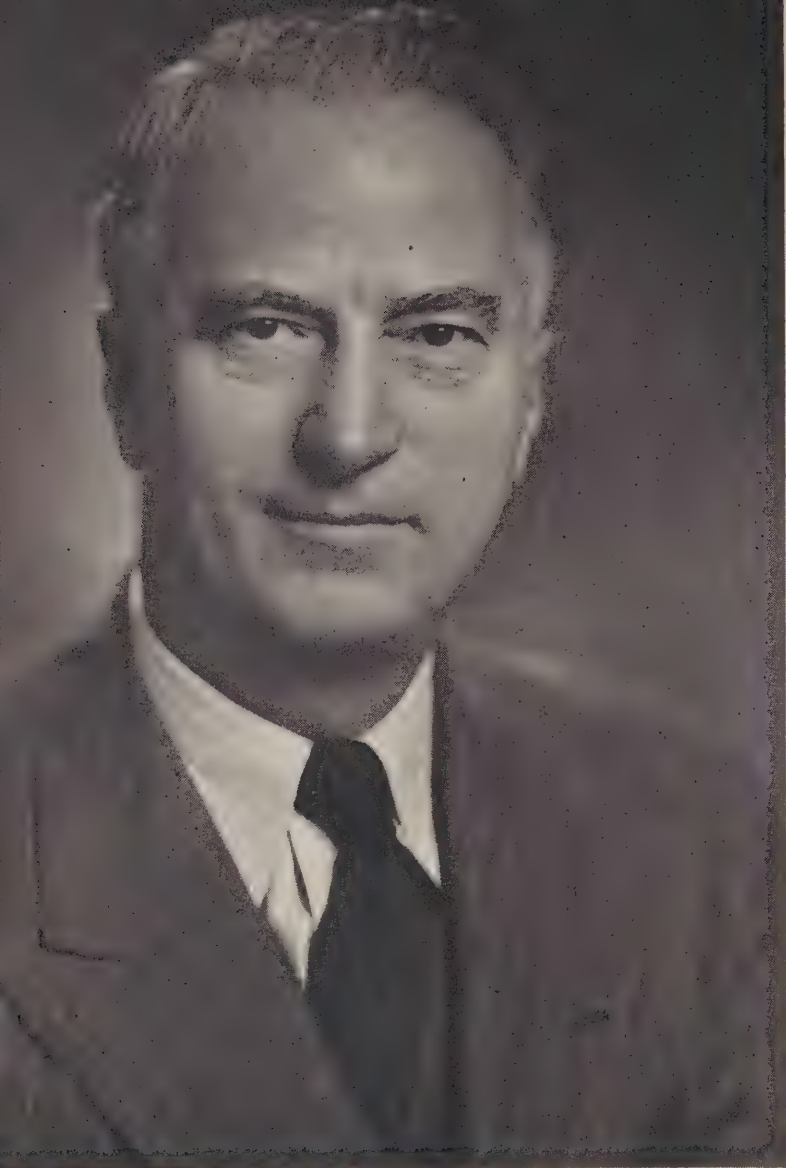
"You cannot keep out of trouble by spending more than you earn."

"You cannot build character and courage by taking away man's initiative and independence."

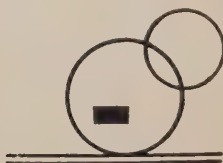
"You cannot help men permanently by doing for them what they could and should do for themselves."

A. Lincoln, per N.W. Dentistry.





R. P. LOWERY, D.D.S.
Toronto, Ontario
President of the Canadian Dental Association



The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, AUGUST, 1950

No. 8

ADDRESS OF THE PRESIDENT OF THE C.D.A.*

by G. VERNON FISK, D.D.S., F.A.C.D., Toronto, Ontario

IN conformity with the By-laws of this Association, it is my duty and privilege to review some of the highlights of the activities of our Association since our last meeting as they were summarized at the recent meeting of the Board of Governors.

Concisely stated it has been a year of considerable advancement. Indeed while progress was noticeable in all branches of our work, it was clearly evident that definite acceleration has occurred in the following three phases which I propose to discuss briefly:

- (1) Dental Public Health and Health Insurance Studies
- (2) Economic Stabilization
- (3) Dental Education.

DENTAL PUBLIC HEALTH

Considerable impetus was given to the Dental Public Health program for Canada when it was reported that Dental Health Committees had become active during the past year in two coastal provinces: Nova Scotia on the East and British Columbia on the West. Provincial Committees are now actively organized in four of the Canadian Provinces. If dentistry is to assume its rightful place as a health service, dental public health committees should be established as soon as possible in every province. Although conditions in the different provinces vary somewhat, it is advisable that there should be a basic similarity in

the pattern of the plan for each province. At present, in some provincial plans, the emphasis is upon treatment service. In these, the recognition of the value of dental health education is apparently minimized. Too much stress cannot be laid upon the importance of a carefully integrated program of dental health education to ensure a positive improvement in the dental health of the Canadian people.

The Canadian Dental Association has a plan for dental public health education which with few variations could be made applicable in each province. The Dental Public Health Committee of the C.D.A. will be pleased to cooperate with any provincial committee in the adaptation of the plan to their particular needs.

HEALTH INSURANCE STUDIES

A year of satisfactory progress was reported by the Health Insurance Studies Committee as it has been more appropriately renamed.

The Board of Governors approved a plan to test the practicability of a voluntary pre-payment dental health care program. Three or more test areas will be selected and the information obtained will be assembled to be used as a possible basis for the setting up of a Pre-payment Dental Health Corporation by the Canadian Dental Association.

Only children of subscribers will be

*Presented at the Annual Meeting of the Canadian Dental Association held in Toronto, Ontario, May 15, 1950.

eligible for treatment under the plan; children up to and including six years of age will be accepted with their accumulated dental needs, those over six years of age will become eligible only after the elimination of their accumulated dental requirements.

To secure optimal results, the plan will be introduced in an area only after a dental health education program has been in operation for some time. In order to reduce administrative costs, benefits under the plan will be available to dependents of subscribers in groups of ten or more on a pay deduction basis. It is possible that after the plan has been properly organized and in operation for some time that individual applications may be considered, but at a higher rate than group subscribers, to defray the additional cost of administration.

ECONOMIC STABILIZATION

Year after year, the ever increasing activities of our Association impose a greater burden of responsibility upon our Secretariat. Unfortunately, however, owing to the limited accommodation at headquarters, it has not been possible to augment personnel to keep pace with the responsibilities occasioned by these increased activities. Consequently, our headquarters staff has been greatly overburdened and this matter was given serious consideration since our last meeting.

After a careful study of the whole financial structure of the Association, the Board has approved a plan for the stabilization of the finances of the Association which will overcome this difficulty by providing our own National Headquarters Building that will be adequate for the accommodation of necessary personnel. A special Housing Fund has been inaugurated with an initial appropriation by the Association from the 1949 operating surplus. It is anticipated that additional voluntary contributions will be made to the Housing Fund by the Corporate Members and also by interested individuals, to make this project a reality in the very near future.

COUNCIL ON DENTAL EDUCATION

Important advances were established by the Council on Dental Education during the year. One of the most important of these was the report on Pre-professional Education in Dentistry, compiled by the late Dr. T. Cowling, which was approved for publication. This report was prepared with the same meticulous care which characterized all of Dr. Cowling's writings. In Dr. Cowling's passing, dental education in Canada has sustained a distinct loss.

Approval has been given and the personnel selected for a survey team for the accreditation of the courses of instruction in dentistry in our Canadian Universities: a survey team of three, composed of two representatives of the dental profession, and a prominent educationalist. The personnel of the survey team includes Dr. A. L. Walsh, former Dean of the Faculty of Dentistry, McGill University, Dr. Harvey W. Reid, Toronto, and Dr. A. C. Lewis, Dean of the Ontario College of Education, Toronto.

In the minds of some, the approval of a dental school by the Council on Dental Education may not be considered important, but, it should be pointed out that administrators of the dental schools favour the survey as it provides them with useful data to present to University authorities in the consideration of pertinent problems such as staff appointments, curricula, or improved teaching facilities, etc.

Commencing September 1st, 1950, a limited number of D.P. dentists will be admitted to a two-year course of instruction, authorized by the Board of Governors, as qualification for the practice of dentistry in Canada. This decision has been made only after a careful study of the variations in standards of the certificates presented by the European graduate dentists for evaluation. Progress was made in the establishment of a National Board of Dental Examiners.

75th ANNIVERSARY OF DENTAL EDUCATION

The development of dental education in Canada was reviewed in a very able manner by Dr. John Fisher in his address at the luncheon on Monday. Dr. Fisher's address was the first of three events in a program to commemorate the 75th Anniversary of the founding of Dental Education in Canada. The clinical at-home arranged through the kind cooperation of Dean R. G. Ellis for Wednesday afternoon at the Faculty of Dentistry building provided the second event and was a veritable post-graduate course in itself, the breadth and scope of which has not heretofore been attempted in Canada. The third event also took place on Wednesday. At a convocation at the University of Alberta, a distinguished member of the dental profession, Dr. John Clay, received an honorary LL.D. degree. This well-deserved recognition of Dr. Clay's merit reflects honour on our profession.

It would be appropriate at this time to pay tribute to the Deans of the Canadian Dental Schools who, during the past 75 years, have played such a prominent role in the development of dentistry in Canada. Their vision and foresight have been largely responsible for raising the status of dentistry to its present high professional level. With singular devotion they have shifted the emphasis of dental teaching from the replacement of lost dental organs to the prevention and control of dental diseases. We look forward with confidence that as the future unfolds, research, under the competent leadership of the Deans of our Dental Schools, will usher in an era in which the major service of the members of our profession in Canada will be the prevention of dental diseases.

NEWFOUNDLAND DENTAL ASSOCIATION

With the ratification of the admission of the Newfoundland Dental Association into Corporate Membership, this afternoon, this Annual Meeting of the Canadian Dental Association be-

comes a memorable one. This is the first time since our Association's incorporation that a Provincial Dental Association has made application for admission as a Corporate Member and it is significant because of the fact that it unifies in our National Body all the members of the dental profession in Canada. Our Newfoundland dentists bring with them a heritage of experience which will contribute greatly to the enrichment of our professional fellowship.

WAR SERVICES MEMORIAL AWARD

The subject chosen for this year's competition, open to members of the graduating class of the five Canadian Universities, was "The Control and Elimination of Pain in Dental Procedures."

It is my pleasure to announce the winners of the Award for 1950.

They are:

1st—Bruce M. Jackson, University of Toronto.

2nd—Conrad Brouillet, University of Montreal.

On your behalf I extend congratulation to these young men upon their achievement.

In conclusion, I wish to express my deep appreciation for the honour of serving as your President during the past year. To have been associated with my colleagues upon the Executive, the Board of Governors and Committees of this Association has been an esteemed privilege.

Personally, and on your behalf, I wish to extend grateful thanks to them and all others who have contributed to the welfare of the Association during the past year. We are especially grateful to our capable Secretary and his efficient staff whose splendid cooperation at all times lightens the duties of each successive presiding officer. To my successor I offer most hearty congratulations. The knowledge that he will also receive the whole-hearted support of the membership and officers will also help to make his tenure of office pleasurable and successful.

Presentation of Honorary Membership to Dr. S. A. Moore

(President's Remarks)

"Each year, it is our custom to single out, for special recognition, one of our members to whom our profession is indebted for its progress and high standing. This group of dentists have priority rating in our Association. They are our Honorary Members.

"At this time we are to add to that illustrious group, the name of another confrère.

"It is my happy privilege now to present for Honorary Membership in the Canadian Dental Association the name of Dr. Stephen A. Moore.

"Dr. Moore was born in Belleville, Ontario, and received his preliminary education at Toronto. After a few years in the business world, he entered upon the study of dentistry, graduating from the R.C.D.S. in 1919. During his course he served for two years as a Sergeant in the Canadian Army Dental Corps.

"After some years in general practice in London, Ontario, Dr. Moore limited his practice to Orthodontics. He has also been active in sport and fraternal circles. His activities in organized dentistry include the Presidencies of the London Dental Society, the Ontario Dental Association and the Canadian Dental Association, all of which positions he occupied with

credit to himself and the office which he held.

"In 1934 the Journal of the Canadian Dental Association was born and Dr. Moore's previous business experience was offered gratuitously as Business Manager for nine years. Several times, owing to reasons of health, he asked to be relieved of this burden, but on each occasion consented to carry on until 1942 when it was possible to relieve him of this responsibility.

"During Dr. Moore's Presidency of the Canadian Dental Association, conferences were held with the Department of National Defence which resulted in the formation of the Royal Canadian Dental Corps. His continued interest in the welfare of the Corps was recognized by his appointment as Honorary Lieutenant-Colonel of the Canadian Dental Corps. Dr. Moore has retired from practice to devote his full time and attention to his family."

The audience rose with Dr. Moore and President Fisk addressed him as follows:

"Dr. Moore: it affords me great pleasure on behalf of the Board of Governors to ask you to accept this certificate of Honorary Membership in the Canadian Dental Association as a symbol of the esteem in which you are held by your confrères."

Dr. Moore's Response

"I feel very humble and terribly embarrassed. I accept the Honorary Membership in the Canadian Dental Association with a feeling of deep gratitude and wish to thank Dr. Fisk for his kind remarks. Like most Irishmen, I enjoy an argument, but kind words overwhelm me.

"Some individuals have more opportunity for greater service but they could do little without the support of

the members of the organization. As I look upon your faces I see so many who have given unselfishly of their time and efforts when this assistance was badly needed. You really earned the recognition I have received today.

"This certificate will have an honoured place in my home and be a constant reminder of this happy occasion and the many friendships made while serving you as an officer of the Canadian Dental Association."

Admission of Newfoundland to Corporate Membership

(President's Remarks)

Dr. E. P. Kavanagh, the official representative of the Newfoundland Dental Association was present by invitation, to participate in the formal ratification of the admission of the Newfoundland Dental Association into Corporate Membership in the Canadian Dental Association.

Briefly, the events preceding this ceremony were as follows:

At the meeting of the Board of Governors held at Saskatoon last year (which was the first meeting of the Board held after Newfoundland became a Canadian Province) the President and Secretary of the C.D.A. were instructed to visit Newfoundland to extend an invitation to the Newfoundland Dental Association to become a Corporate Member of the C.D.A. Following a meeting with the Newfoundland dentists held in St. John's on October 31, 1949, a resolution was received which was read at the meeting by the Secretary. The text of the resolution follows:—

"Whereas Newfoundland has become a province of the Dominion of Canada and whereas the members of the Newfoundland Dental Association have been invited to become members of the Canadian Dental Association, be it resolved

"That application be made to the Board of Governors of the Canadian Dental Association, on behalf of the members of the Newfoundland Dental Association to become Corporate Members of the Canadian Dental Association."

This resolution was approved by the Executive Committee at a meeting held on February 13th, 1950, and recommended for favourable consideration by the Board of Governors who gave approval at the session just completed. Under the Constitution of the

Association it must be presented at a general meeting for ratification.

At this point in the proceedings, the President called for a motion which Dr. H. M. Cline of Vancouver presented after reading the first sentence of Article II, Sec. 1 of the By-laws which is as follows:

"Corporate members shall consist of all provincial statutory dental corporations which shall have made application for and shall have been admitted to Corporate Membership by the members of the Association in general meeting regularly assembled."

It was then regularly moved by Dr. H. M. Cline and seconded by Dr. G. Ratté

"That the application of the Newfoundland Dental Association for Corporate Membership in the C.D.A. be ratified."

The motion was carried unanimously by a standing vote of the large and representative number of the members.

Dr. Fisk then addressed Dr. E. P. Kavanagh as follows:

"Dr. Kavanagh—by unanimous vote, the members of the Newfoundland Dental Association have been elected to Corporate Membership in the C.D.A.

"It affords me much pleasure, on behalf of the dentists of Canada, to welcome you into this active partnership. It is our conviction that you will contribute greatly towards the raising of the status of the profession of dentistry across Canada."

Dr. Kavanagh then addressed the meeting, following which he was thanked and requested to convey the best wishes of the meeting to the members of the Tenth Corporate Member of the C.D.A.

Dr. Kavanagh's Address

"Mr. President, I am very honoured and happy to be the first Newfound-

lander to address you, Sir, as President, and the members of your organi-

zation as Fellow Members of the Canadian Dental Association.

"I bring fraternal greetings from your Tenth Province, and I have been instructed to convey to you an expression of our appreciation of the many courtesies extended to us from the first day of the Union of our two countries, by your administrative staff.

"We, in Newfoundland, were happy last October to welcome you, Mr. President, and with you, your Secretary, Dr. Gullett, to our shores. We hope that the incoming President will find it convenient to visit our Province during his country-wide visitation this year.

"It has been a real experience to me to have had the privilege of attending your Board of Governors' Meeting. I have been amazed at the amount of work which they do, at the way they go about it, and with the degree of scholarship so evident in each and every one of them.

"I have realized that there is not a great deal of difference between us. Basically, we have the same problems. Yours, of course, are much greater and more complex than ours but like you, we openly and freely discuss them and like you, we can try to see the other fellow's point of view.

"I have with me at this meeting a colleague from Newfoundland—Dr. Frank Hogan, whom a few of you have already met. We both have tried to be ambassadors from our country at this time, and we have been particularly insistent on how you pronounce the word 'Newfoundland.'

"You, in turn, have given us a few

words and when we get back home, sometime the end of the week, I suppose, and make up our minds to go back to work, we have decided that our assistants are to be instructed that when someone phones for an appointment, the patient is not to be told that he or she can have one on the following day, but rather that 'we concur,' 'we agree,' 'we have no comment,' or 'the appointment could be made available if we could delete some other patient's name, from, say, ten to eleven a.m., from the numeral one to ten inclusive!'; and, as Dr. Charron would say, 'Period.'

"Unfortunately, it is not possible for me at this time to extend to this Association an invitation to come to Newfoundland for an Annual Meeting—if I might borrow an expression from Dr. Carver—in the foreseeable future, but rest assured if at any time any member of this Association should be in our province and he or she will call on Dr. Hogan or myself or any other of the 'Indians' in practice, he will be given a reception straight from our hearts.

"For a little over a year, since the day of Union, your Association has not been national. With the adoption of the motion just passed you can again say that you represent all of Canada.

"Mr. President, on behalf of the Newfoundland Dental Association, I am pleased to accept corporate membership in your Corporation. I wish the Canadian Dental Association every success in all its endeavors. Thank you very much."

Open Session

At the open session of the C.D.A. which followed, President Fisk announced:

"Inasmuch as this is a Joint Convention and as the greetings of the American Dental Association were presented at the luncheon meeting on

Monday by Dr. C. I. Taggart, and those of the British Dental Association were presented at the luncheon meeting on Wednesday by Dr. J. E. Parfitt, the Secretary was instructed to read these addresses into the minutes of our Association."

NEW FRONTIERS IN EDUCATION*

by D. M. GRAHAM, Forest Hill, Ontario

THE FACT that over two hundred and fifty briefs were submitted to the Hope Commission on education is an indication of the wide diversity of opinion that exists in this province with regard to the purposes of education. But out of this diversity one can see three distinct points of view; it is not my purpose to elaborate fully on them but bring to your attention the central concept of each.

1. The vocationalist believes that education must be practical, and informational; that it must teach skills and give knowledge that will increase earning power. Mr. R. S. Livingstone, Director of Personnel of the Thompson Products Company, sums up this point of view, which is so widely accepted. He says, "I think most of you will agree generally with this broad statement — that the purpose of education is primarily and basically to equip young people with knowledge and skills by means of which they can most effectively contribute to the production of food, clothing, shelter and the luxuries which go to make up our standard of living."

A postcard request to an American University brought through the mails descriptive material for one hundred and seventeen different courses. Our complex industrial society has resulted in narrow specialization. Of the seventy thousand workers at Oak Ridge not one knew that the end product of his work was the atom bomb. As some one has said, "We have become less than men; we have become specialists."

The Harvard report, General Education in a Free Society, one of the most significant documents of our time, has attempted to resolve this major problem: "What is the right relationship between specialism on the one hand that leads into any one of a thousand different destinies, and education in a

common heritage and toward a common citizenship on the other?" This emphasis on the vocational aspect of education reflects a materialistic society which believes that the end of education is economic and social success.

2. The most influential force in American education in the twentieth century is the philosopher John Dewey. This school of thinking believes that we must help youth "adjust to the complexities of modern society." We must provide the student with experiences meaningful to him. "In education, in morals, in political life fresh ideas are tested in the crucible of social experience." We must start from the student's own frame of reference, and use that as a spring board for further growth.

It was my privilege a few months ago to visit the Laboratory School at Ohio State University, to see the Core Curriculum in operation. For two hours a day the students studied a problem that was meaningful to them; only the subject matter that was relevant to the problem was introduced. A Grade XI class was studying the problem "Living in the Atomic Age." The teachers were convinced that this approach to education provided experiences that would produce socially mature citizens.

In special Grade IX classes in the Ottawa secondary schools the local environment is used to provide insights and experiences in democratic procedures; visits to the courts and the House of Commons motivate the study of our heritage of freedom. In this situation the teacher must be able to discriminate and abstract from the past what is relevant to this heritage.

The Deweyites believe that the scientific method must pervade the entire curriculum; students should be taught

*Address delivered by Mr. D. M. Graham, Director of Education, Forest Hill Village Schools, to the Academy of Dentistry, Toronto, November 24, 1949.

to evaluate critically what they hear and read; they should examine facts in a detached, impersonal and objective way; they must hold opinions tentatively, as a working hypothesis because new data and new experience will bring new insights. In the area of value judgments they must test the validity of their inherited beliefs.

3. The leading exponents of the classical and traditional point of view are men like Sir Richard Livingstone in England and Chancellor Hutchins of the University of Chicago. They believe that one of the major purposes of education is to hand on an inherited view of life and to teach men how to live it. In a democratic society there must be certain common beliefs held by the doctor, the plumber, the teacher, the lawyer, the farmer and the housewife; these common learnings must be perpetuated if society is to survive. The spiritual heritage of Western culture is the fruit of our Hebraic-Christian and Hellenistic traditions. The traditionalist believes that we must transmit this heritage to each generation, as it is the source of our spiritual growth. Since the problems of our time are moral and spiritual, the ends of education must be character, wisdom, and spiritual insight.

Since I believe that we must find a synthesis of these three points of view if we are to achieve the Greek ideal of balance I am defining education as "the development of all the talents of the individual for socially useful living." This definition has historical roots. During a crisis in the last war the late President Roosevelt said on one occasion, "We are inspired by faith that goes back through the ages to the first chapter of the Book of Genesis—'God created man in his own image.' We are fighting as our fathers have fought to uphold the doctrine that all men are created equal in the sight of God."

The idea of the dignity of man is the most dynamic idea in our culture. When we translate this concept in terms of education it means that every boy and girl is a spiritual being endowed with special talents and abilities

that must first be discovered, and then developed. I am going to suggest ways in which the school must meet this challenge.

1. *Testing*

This delicate instrument must be used only by the trained psychologist. It is an invaluable tool in indicating abilities and capacities; but it has its limitations. We must resist the temptation to categorize children prematurely and put them into narrow compartments.

Research has shown that a major cause of failure both in the elementary and secondary levels of education is reading impairments. We, at Forest Hill, have a teacher who is specially trained in this field, and who works almost exclusively at the Grade III level. Through the use of specially devised tests she is able to isolate the reading disability, and then do the necessary remedial work with small groups of three or four students.

We have, also, instituted an In-Service Training program in reading, and every teacher in our primary grades will be relieved of class room teaching for a week or two in order to work with our reading specialist. In a highly verbal and book-centred curriculum it is impossible to communicate adequately with a student until reading disabilities are removed.

2. *Individual Differences*

The genesis of the progressive education movement was a protest against the mass approach to education, and with all the excesses and limitations of this movement it has made one lasting contribution to education in its emphasis on the individual child.

In classes in the Forest Hill Schools where we thought we had a homogeneous grouping of ability, tests have revealed wide differences in the capacity to learn. A colleague of mine was telling me about a girl in one of his Grade IX mathematics classes who could not do algebra. One day, in exasperation, she said to this teacher, "Sir, I know I can't do algebra, but I'd like

you to know that I won a prize for sewing at the Exhibition, and I'll bet you that is something you couldn't do." This girl failed her year and withdrew from school because she did not have the capacity to think in the abstract; she could not cope with the highly verbal and book-centred curriculum of the Ontario secondary schools.

We are hopeful that the changes in curriculum as announced by the Minister of Education will sound the death knell of the identical curriculum in our provincial school system. We must remember that in Canada only three per cent of the population attend university, and the present curriculum is focussed on this small group.

I am a member of a Canadian Education Association Research Committee which is now studying the problem of the alarming number of withdrawals from our Canadian schools. There is sufficient data available now to conclude that the major reason for this situation is a rigid curriculum which is not meeting the needs of the non-college students.

We cannot develop the potentialities of the child if he has personality deviations and emotional disabilities. Statistics show that five out of every hundred children in our elementary schools today will spend part of their lives in mental hospitals. School surveys in Ontario reveal that ten per cent of the children need expert treatment for emotional disturbances. It is costing Canada one half billion dollars a year for mental illness.

The University of Toronto and the National Committee for Mental Hygiene are collaborating on a research program that eventually will reach into the classrooms of our nation with a program of prevention. We feel fortunate that the Forest Hill School is being used as a laboratory for this project. It has three aspects:

1. *Research*

Dr. J. R. Seeley, an eminent sociologist, has tested all our students from the Grade IV to the Grade XII level. The research has many ramifications

and a great deal of significant data will be available in the next five years.

2. *Therapy*

A clinic with a psychiatrist, a psychiatric social worker, and a clinical psychologist is doing very effective work with the cases referred to them by an expert counselling team composed of Dr. J. D. M. Griffin, Dr. Wm. Line and Dr. J. R. Seeley.

3. *The Teaching of Human Relations*

We are quite convinced that these classes have significance in three fields: mental health; democratic living, and character education. Through participation in the counselling teams, clinic, and Human Relations classes the members of our staff are getting new insights into the emotional problems of the students.

To what purpose must the talents and capacities of our young people be directed? I have defined education as "the development of all the talents of the individual for socially useful living."

Dr. George Counts of Columbia University, has drawn attention to the phenomenal growth in education during the years between the two wars: eight million students in Russia increased to forty-five million in one generation; Japan claimed the highest literacy in the world; we naively believed that universal education would usher in the millennium. Now educationists are probing deeply. There is a strong conviction that we must revise our purposes drastically if we are to avert a catastrophe. The Harvard Report has underlined two words: DIGNITY and DUTY. To the concept of the dignity of man must be added a sense of his duty to his fellow man. If our democratic society is to survive, we must achieve that delicate balance between freedom and responsibility.

Judge Botein of the New York Supreme Court has coined a phrase that underlines the new direction that education must take. He calls it "an internship in community living." We must begin at an early age to sensitize

young people to the needs of others; we must give them what the Quakers call a "concern." Since a commitment to a value is the result of experience and reflection, we must give our youth practice, at their own level of experience, in doing things for others. In our school system we use the Community Chest campaign as one medium through which we hope to sensitize our young people to the needs of others. Last fall we had one hundred and thirty-two students visit the social agencies affiliated with Community Chest. As a result of these visits for instance a Grade XII class in our Collegiate became interested in the Second Mile Club, an agency that provides recreation and friendship for old people who live in lonely rooms in our city. The students, in a quiet, unobtrusive way, are doing many things for and with the old people. They decorated the house at Christmas; they dug the garden last spring; they put on concerts, and in many ways made a contribution to the work of the Second Mile Club.

This type of experience must be repeated in our homes, schools and churches if we are to help our young people sensitize themselves to the needs of their fellow man. As a parent I must be able to so sensitize my imagination in order that I can put myself in the role of my children, identify myself with them so that I can enter their world and communicate with them. I do not know of any other way that I can help them with their problems.

The late Dr. Bowman, of Johns Hop-

kins University, has summed up what I have been trying to say when he met a freshman class with these words. "We hope you will think of your growing skills and knowledge always in relation to your duty to the community. It would be a terribly lonesome business to know how to do something well just to get ahead of someone—to gain a personal advantage.

"In time you will become engineers, or doctors, or lawyers, or economists, or businessmen. What we can do for you will be of no lasting importance if we have not taught you that citizenship comes first today in our crowded world. No man can enjoy the privileges of education and thereafter with a clear conscience break his contract with society. To respect that contract is to be mature; to strengthen it is to be a good citizen; to do more than your share under it is to be noble."

It is my conviction that education will fail unless we send young people from our schools and colleges with an inner frame of reference which is derived from a dynamic religious faith. Over the entrance to the Physicians and Surgeons Building in Paris is this inscription: "We dressed his wounds; God healed him."

When Man links his purposes to the great eternal purposes behind life, he then discovers that there are "great faiths to live life by, great resources to live life from, great purposes to live life for."

"Education is the development of all talents of the individual for socially useful living."

We cannot preserve the freedom of the practice of dentistry and medicine; we cannot keep dentistry and medicine uncontrolled and unregulated by the Federal Government; we cannot maintain our American free and independent practice in the health services by simply denouncing socialization or by a standpat opposition. We must present a forward-looking, constructive program for our health services in the United States.—Lester C. Hunt, D.D.S., U.S. Senator from Wyoming.

*We flatter those we scarcely know. We please the fleeting guest.
And deal fully many a thoughtless blow to those who love us best.*

—Ella Wheeler Wilcox

Efficient, Health-Giving Contribution Through Corrective Operative Reconstruction*

by DR. LOUIS C. SCHULTZ, University of Michigan School of Dentistry,
Ann Arbor, Michigan

THE exacting performance of supposedly simple operative reconstruction precludes the necessity of dramatic or drastic intervention, in the future years of our patient. This factor is important in considering the maintenance of good health for our dental patients. No operative task is so simple but that it deserves operative attention of the highest order. The best expression of operative skill results only when we have a proper atmosphere of cooperation between dentist and patient. This does not happen by accident. It requires a large measure of mental and physical discipline from both parties. It is best for the dentist to direct and the patient to follow. A timid, hesitant approach does not, as a rule, permit the dentist to render service of high quality. Rather in a courteous, understanding and evidently intelligent fashion the dentist must stand as captain of his ship. A few words, properly spoken, create the desirable climate for good operative service. Of parallel importance in patient management are the actions of the dentist and the physical objects that surround him. Daily we should strive to remove flaws from the stage setting on which we hope to render good operative service.

If we think constantly and constructively as we work, we will do more good dentistry in a shorter period of time with less disturbance to our own good health. We all do know, that when we truly exercise the knowledge and understanding that we possess, we act in crisp and direct manner. It is at this stage that our work becomes one of our favorite hobbies.

With this attitude we now approach

the problem of patient management in operative dentistry.

PREMEDICATION

The apprehensive type of patient will develop into a good patient, if we add to our approach, premedication. Our favorite sedative at this writing is sodium seconal. One half to one hour before the dental appointment the patient takes $1\frac{1}{2}$ grains of seconal. The ends of the capsule are pricked with a needle, the capsule is taken with $\frac{1}{2}$ glass of hot water or hot milk. This patient is not permitted to drive a car. In many instances the patient comes to the office $\frac{1}{2}$ hour before operative appointment and the sedative is administered at the office. Through observation we may vary the dosage of seconal to be given; some individuals respond favourably to a $\frac{3}{4}$ grain capsule of seconal. Some people do not sleep well the night before a dental appointment. These patients are given $1\frac{1}{2}$ grains of seconal at bed time, the night before their appointment. This procedure secures a good night of rest for our patient. When faced with a difficult operative procedure this patient may also be given $\frac{3}{4}$ grains of seconal $\frac{1}{2}$ to 1 hour before the dental appointment. Choose any suitable premedication, its administration will permit the performance of good operative dentistry.

A temper-testing problem is the patient that brings to our office a copious flow of saliva. We must not permit this influence to undermine the excellence of our operative treatment. Without hesitation, in all these cases, we properly demand that this patient take 1/100 grain of Atropine Sulphate

*Presented before the Academy of Dentistry, Toronto, March 1950.

one hour before the dental appointment. In very extreme cases another 1/100 grain of Atropine Sulphate is given as the patient is seated in the dental chair.

ANAESTHESIA

Operative dentistry, bearing the stamp of excellence, is best accomplished in the presence of profound local anaesthesia. Small diameter (28 gauge) sharp injection needles are preferred. The anaesthetic solution and syringe are heated to a temperature of 100°F., approximately. We should not inject cold solutions. All preparation for anaesthesia is completed behind the patient's back. The assistant holds the syringe on a clean towel behind the patient's ear, conveniently positioned in respect to your hand. The tissues are swabbed with antiseptic, our choice being tincture of mercresin. It is not wrong to suggest to the patient that this solution will have a slight numbing effect upon the surface tissue. At the moment of injection, tissues adjacent to the injection area are sharply pinched or plucked. In this manner we hide the impact of the needle puncture. Slowly the injection of solution takes place. In a quiet voice the patient is admonished to breathe deeply, very deeply. With deep breathing a patient acquires suitable relaxation and apprehension is dispelled. When the anaesthetic syringe is removed, the assistant gives the patient a short section of cotton roll, saturated with English smelling salts. Patients do not faint if they note that suitable arrangements for their comfort are constantly in evidence. Always a suitable length of time must be given for full anaesthesia to take place.

CONVENIENCE FORM

Consider now convenience form in the supporting tissues, surrounding the teeth. With correct convenience form it is possible to gain the utmost in excellence and quality of operative reconstruction. It is impossible for the dentist to do good work in the pres-

ence of hypertrophic haemorrhagic gum tissue. We briefly suggest:

1. Correct stimulation of the supporting tissue and brushing of the teeth as an absolute daily must.

2. The use of the rubber dam.

3. Surgical tissue packs, preliminary to cavity preparation.

Successful, health service, operative dentistry follows the proper establishment of biologic harmony between all phases of reconstruction and the living patient. For example, the biologic relationship between the bridge inlay and its host, the pulp organ, determines the future health of the pulp organ and possibly, the patient. Many factors contribute to this relationship; tonight we shall consider one sector of the problem: Effective medication in cavity preparation.

Editor's Note: Dr. Schultz spoke from this point in reference to slides that were projected on the screen. The list of medicaments he used in his discussion follow—

MEDICAMENTS IN OPERATIVE DENTISTRY

1. To desiccate tooth surface and soft tissue
 - Liquid Dam
 - Alcohol 59.4 gm.
 - Formaldehyde .3 gm.
 - Menthol .3 gm.
 - Keep this solution out of cavity preparations.
2. Protection against haemorrhage and serum seepage
 - 1% Neo-Synephrin Hydrochloride
 - Frederick Stearns Co., Detroit
3. Alcohol (grain)
 - Use sparingly
4. Phenol (Liquified)
 - Use as cavity antiseptic.
5. Cavity antiseptic combination
 - Beechwood Cresote (Morson's)
 - 1 part by Vol.
 - Phenol (Liquified)
 - 2 parts by Vol.
 - 3 parts by Vol.
 - Eugenol
 - 3 parts by Vol.
- A sedative non-irritating antiseptic. Favourable reaction follows the use of warm antiseptic after room temperature application. Note 4 and 5.
6. Cavity Varnish
 - Use a thin varnish beneath all permanent cements and all restorations.
7. A sedative antiseptic cavity dressing
 - ZnO powder (Analytical Reagent)
 - Liquid to be used—choose one
 - a. Eugenol
 - b. Chlorobutanol 8 gm. in oil of cloves, 30 cc.
 - c. Cavity antiseptic combination.
 - Make a thin creamy mix. apply to exposed dentine, cover with A.D.A. Formula No. 2
8. Ammoniacal Silver Nitrate (Howe)
 - In ampoules
 - P.N. Condit, Boston, Mass.

THE CONTROL AND ELIMINATION OF PAIN IN DENTAL PROCEDURES*

by BRUCE M. JACKSON†

THE subject, Control and Elimination of Pain in Dental Procedure, is one which is always before the dentist, whether he be a general practitioner, or a specialist in one of the several branches of dental science. It is also the main concern of anyone contemplating a visit to his dentist. The degree of pain suffered by the patient is very often the standard by which he judges the ability of the dentist. How many times a day do we hear the query, "Doctor, is this going to hurt?" And how often can we reply that, "this will hurt very little," or "not at all"? We can give that answer more and more frequently, as our knowledge of the cause of pain in dental procedures, and the means to reduce it, is rapidly increased. It is undeniably to our advantage to avail ourselves of this knowledge, and to control pain as much as possible—in order to increase our reputation and practice if for no other reason. And is it not much easier to work on a patient sitting quietly in the chair, rather than one who is jumping with each spasm of pain? But it should be our concern to be humane enough to wish to reduce all pain to the absolute minimum simply for the sake of the comfort of the patient.

It is with this goal in mind that I have compiled the following information, gathered from many sources, the application of which should materially assist in controlling or eliminating the pain incident to dental procedures. This information is not confined to operative dentistry alone, but includes any and all procedures which are likely to result in pain and discomfort to the patient.

CAUSES OF DENTAL PAIN

Dental pain may be caused by operative, surgical, orthodontic, or other dental procedures. Before studying what we as dentists may do to prevent such pain, however, it is necessary that we understand how this pain is produced. Without such an understanding, or, having the understanding but not applying it, we cannot and should not expect to have the confidence of those who come to us for dental care.

Perhaps the most common source of dental pain is that caused by the heat engendered in cavity preparation. Henschel (1) has shown that the normal threshold of irritability of teeth to thermal change is between 85° and 135° Fahrenheit, but that the surface temperature of dentine being cut with a No. 558 bur, at 2,000 r.p.m.'s and one to four pounds pressure, may be 166° to 368° Fahrenheit. Wolff (2) has shown by tests using electrical stimulation that there is a considerable variation of the pain threshold from tooth to tooth in the same individual and even at various sites on the same tooth, depending on the thickness and intactness of the enamel. The pain threshold also varies in different individuals, so that what is only slightly uncomfortable to one person may be exceedingly painful to another. It is generally believed to be higher in men than in women, and higher in adults than in children.

The heat of dental "drilling" causes expansion of the fluid, known as dentinal lymph, in the dentinal tubules, and pressure is set up on the fibrils

(1) Henschel, C. J.—pg. 194-200, J.A.D.A. Feb. 1946.

(2) Wolff, H. G.—pg. 435, Headache and other Head Pains.

*First Prize Essay in the Canadian Dental Association War Memorial Essay Competition for the year 1949-1950.

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entering the dentinal tubules from the odontoblasts in the pulp. Since the odontoblasts are in physiological contact with the nerves in the pulp, the impulses of pressure are relayed to them and sent to the brain as sensations of pain. The dentino-enamel junction is particularly sensitive because these tubules anastomose very freely in this region.

Following surgery, such as the removal of an impacted third molar, or even the simple extraction of a tooth, there is frequently pain and swelling. This may be due to trauma of the tissues during the operation, or to an inflammation resulting from some foreign object left in the wound, or subsequent infection of the wound from the oral cavity. Infection due to unsterile instruments is now virtually unknown in modern dental practice.

A tooth subject to orthodontic treatment often becomes painful when subjected to pressure, because of inflammation of the periodontal membrane. In severe cases there may be hyperaemia of the pulp. Since the walls of the pulp chamber cannot expand to allow for the increased blood volume, the blood vessels squeeze the nerves of the pulp, producing a very severe pain. Such hyperaemia may be an aftermath of excessive heat from cavity or crown preparations.

MEANS OF CONTROL AND ELIMINATION

Thermal

Henschel's investigations have shown that heat produced in cavity preparations is directly proportional to the size, sharpness and vibration of the dental bur, and the speed and pressure with which it is used. Therefore, we should use small, sharp burs at a moderate speed of about 1,000 to 1,500 r.p.m.'s (3) for steel burs and a fairly light touch of one-half to four pounds pressure. Neither should we drill for prolonged periods, but should stop at short intervals to allow the bur and tooth to cool off. A loose or vibrating bur in the hand-piece will also cause a

considerable amount of heat and pain because of its uneven action. It is also important that our hand instruments should be intelligently selected and used, and that they are always kept sharp. It is wise to keep a small sharpening stone handy on the cabinet, so that, with a few strokes, the edge can be renewed on the instruments as they are used. These precautions will help considerably to reduce pain. The use of local anaesthetics or other methods does not, however, mean that we can ignore them if we are to prevent post-operative hyperaemia and pain.

Several operators have experimented, with quite satisfactory results, with air or water directed on the cavity in synchronization with the bur. The jet of air or water is directed on the cavity by a nozzle clipped to the hand-piece. Many dentists have claimed to have eliminated pain completely, or to have reduced it to a minimum through the cooling effects of this jet. The main objection to the air blast is that it dries out the dentine, while the water jet floods the cavity, making vision difficult. The most efficient of these seems to be water in the form of a spray which does not flood the cavity to as great extent as the water alone. The idea of a water spray is not a new one, as it dates back to 1874, (4) but it has only recently become popular.

Dr. M. Goldenberg (5) describes the use of ethyl chloride in the form of a spray before commencing the cavity preparation. By spraying it on the tooth for about one second, the temperature of the tooth is so reduced as to permit the preparation of most cavities with little or no pain. This method may, however, be detrimental to the tooth by creating too low a temperature. There is also a danger of the patient himself being anaesthetized at the same time.

Another method, suggested by H. J. Kauffer (6) is to desensitize the dentine

(3) See previous reference to Henschel's investigations, page 2.

(4) Henschel, C. J.—pg. 195 J.A.D.A., Feb. 1946.

(5) Goldenburg, M.—pg. 217 J.C.D.A., May 1947.

(6) Kauffer, H. J.—pg. 169, 170 New York Jnl. of Dent., May 1947.

by alternately wetting the cavity with chloroform and drying it with hot air, followed by the application of alcohol. The chloroform reduces the fatty substance of the dentinal tubules, while the alcohol dehydrates the dentine. Then, while the dentine is still warm, mineral oil is placed on the cavity walls to prevent heat and trauma while drilling.

G. V. Black (7) early suggested penetration and undermining of the dentino-enamel junction when drilling. By advancing the bur at an angle under the junction, thus severing the dentinal tubules before they anastomose, the overhanging portion can be removed with less pain.

A recent development which has received considerable publicity, and was recently discussed via telephone on the University of Illinois Round Table Discussions, bears promise of doing much to reduce the pain of cavity preparation. Instead of the conventional type of hand-piece, a fine pin-point nozzle directs a blast of very fine particles of abrasive on the tooth. Known as Air-Dent, it has not been perfected as yet, but operators using it have claimed that cavities were prepared with little or no pain.

Aside from the thermal control of cavity preparations, we should also be careful of thermal changes in the insertion of medicaments, cements and filling materials in cavities, and in the use of air and water sprays. Some dentists today question the use of medicaments such as phenol, which cause pain due to the cooling effect of evaporation. When used, they should be warmed to body temperature. When mixing cements, they should be mixed according to the manufacturer's instructions and on a slab cooled to about 65° Fahrenheit, to prevent the formation of heat while setting. Metallic fillings, particularly in deep cavities, should have a cement base to prevent the transmission of thermal shock to the tooth. Any spray used on the tooth should be

warmed to body temperature for the same reason.

ANAESTHESIA

It has long been argued in dental circles whether local anaesthetics should or should not be used in operative dentistry. At the present time there are more and more dentists giving "locals" for cavity preparations, with seemingly satisfactory results. The majority of patients prefer to have a "local" when having a tooth filled, and it makes the dentist's work much easier and quicker. There is no reason why the use of a local anaesthetic should not be safe as long as a little common sense is used with it, and there are not long periods of uninterrupted drilling. Such periods of prolonged drilling, even though not painful to the patient, are likely to cause permanent damage to the tooth.

In order to use a local anaesthetic effectively we must know the anatomy of the nerve supply to the teeth and their associated structures. Since every dentist knows these, it is merely necessary to review them here. The nerve supply to the teeth comes from branches of the Fifth Cranial or Trigeminal nerve. The maxillary nerve breaks up into three main divisions to supply the maxillary teeth, with accessory branches to the palatal region. The three branches to the teeth are the anterior, middle and posterior superior maxillary nerves. The anterior branch supplies the incisor and cuspid teeth, the middle supplies the bicuspid teeth and the mesial root of the first molar, the posterior branch supplies the distal roots of the first molar and the second and third molars. The palatal branches are the naso-palatine nerve, which emerges from the naso-palatine or incisive foramen and supplies the anterior part of the palate, and the posterior palatine nerves, which supply the whole of the hard palate. The mandibular branch of the Fifth nerve supplies all the mandibular teeth, entering the jaw through the mandibular foramen of the ramus, and running through the mandibular canal

(7) G. V. Black—pg. 64 *Operative Dentistry*
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to the mandibular symphysis. Between the apices of the bicuspid teeth is the mental foramen where the mandibular nerve gives off the mental branch to the lower labial tissues and lower lip. Accessory branches to the tissues are the lingual and long buccal branches of the mandibular nerve, which supply the lingual and buccal tissues respectively. In addition to these there may be nerve fibres coming up from cervical branches in the neck to the buccal tissues.

For operative procedures in upper teeth a suprapariosteal injection is usually sufficient. To anaesthetize the second and third molars and distal roots of the first molar, insert the needle in the buccal fold above the second molar and advance it diagonally upward and backward, injecting over the apices of the third molar. For the bicuspids and mesial roots of the first molar, inject over the apex of the first bicuspid. An injection made over the apex of the cuspid on either side will anaesthetize the six anterior teeth, or else these teeth may be anaesthetized individually by injecting over the apex of the root. It is wise, with an injection of this type on a maxillary central, to inject on either side of the frenum, in order to anaesthetize nerve fibres crossing over from the other side of the arch. These injections are usually sufficient for operative work, but for extractions or surgery, it is also necessary to make a posterior palatine injection, by injecting at a point bisecting an imaginary line drawn from the palatal root of the third molar to the mid-line of the mouth. For anterior teeth, a naso-palatine injection is indicated. In making this injection, first inject into the labial fold, then pass the needle through the inter-proximal space between the two centrals, anaesthetizing the tissues around the incisive foramen. Then the injection may be made directly into the foramen itself.

A mandibular block injection is sufficient for most operative procedures on the mandibular teeth, except for the

lower anterior teeth. In this case it may be necessary to use a mandibular block on both sides. For surgical procedure, in addition to the mandibular injection which will include the lingual nerve by injecting slowly into the tissue while withdrawing the needle, it is also necessary to anaesthetize the long buccal nerve. This injection is made by inserting the needle into the mucobuccal fold at a point just anterior to the first molar and slowly advancing the needle parallel to the occlusal plane as far back as the third molar, injecting the solution slowly while advancing the needle.

Although the local anaesthetic is undoubtedly of value in eliminating pain, many people dread "the needle" because of the pain felt in making the injection. Many operators use a topical application of cocaine or benzocaine at the puncture point. Another method of overcoming this pain is described by Dr. W. A. Ferguson (8). His technique consists of pulling the tissue over the needle, rather than pushing the needle into the tissue. With a suprapariosteal injection pull the lip out so that the tissues are fairly taut, then pull them over the needle. With the palatal injection, place the needle in position, then push the head into it. In a mandibular block injection place the needle and tighten the mucosa so that the point penetrates it. This technique has been tested by other operators and found to be satisfactory.

With present-day anaesthetic solutions standardized and put up in car-poules, complications arising from the anaesthetic itself are becoming quite rare. For anybody using stock-bottles, or making up their own solution, however, it is highly important in preventing post-operative pain to use solutions which are aseptic and isotonic. With any local anaesthetic injection, however, it is necessary to inject slowly to prevent after-pain as a result of tearing the tissues with too rapid an injection.

(8) Ferguson, W. A.—Pg. 705-706 J.A.D.A., May 1947.

In surgical cases where the use of a local anaesthetic is contra-indicated, or where the patient himself desires it, nitrous oxide has been invaluable as a general anaesthetic. Nitrous oxide is the ideal general anaesthetic for dental purposes of any yet discovered. It is rapid both in induction and recovery, with no after-effect, is non-explosive, and, in the hands of a skilled operator is quite safe. The chief danger from it is anoxia, due to the low amount of oxygen which must be given to maintain anaesthesia. Premedication is often used with nitrous oxide to calm the patient, and make induction easier and more pleasant.

Another less popular method of obtaining general anaesthesia is continuous pentothal sodium injection. This is used in conjunction with a procaine nerve block. A technique of administration is described by E. C. Thompson (9). He uses 2.5% sodium ethyl thiobarbituric acid. Inject four or five c.c. slowly, and ask the patient to count aloud. When the counting stops, the procaine injection is given and the mouth packed. One or two c.c. more of pentothal are given to allow immediate operation, and more given as muscular signs are noted during the operation. This method appears to be satisfactory as regards rate and ease of induction and lack of nausea, but is unsatisfactory in that it requires four persons for an operating team, and is not entirely safe, some fatalities having occurred.

ANALGESIA

Self-administered analgesia with nitrous oxide gas has become quite popular both with dental patients and dentists who have used it in their offices. This may or may not be used with premedication. A nosepiece is placed on the face and a rubber bulb placed in the patient's hand. By squeezing the bulb, the patient gives himself small amounts of anaesthetic, sufficient to obtund pain without producing complete anaesthesia. There is little danger

of an overdose, as, beyond the analgesic stage, the patient is unable to clench his hand sufficiently to give more of the gas. This method has also been used substituting ethyl chloride for the nitrous oxide. A state of analgesia may also be produced by the use of barbiturate drugs.

PULP INVOLVEMENT

One of the most agonizing pains encountered in dental practice comes from a hyperaemic, inflamed, or infected pulp. One common cause of hyperaemia of the pulp is too rapid orthodontic movement of teeth. This condition is unnecessary and can be avoided by taking a little more time in moving the teeth, putting less tension in the springs. Another cause already mentioned is excessive heat in cavity or crown preparation. But aside from these, we frequently find pulps that have become inflamed from caries, a blow on the tooth, or some similar cause. In such cases immediate relief is often obtained by opening into the pulp, under anaesthesia, thus relieving pressure. A soothing dressing such as eugenol on a cotton pellet may then be placed to relieve pain until such time as root-canal therapy, or whatever treatment is indicated may be undertaken. In these cases a single seal of temporary stopping should be placed, so that in the event of another flare-up of the pulp the patient may effect relief by removing the stopping, the pulp then having to be treated as an infected pulp.

DENTINE DESENSITIZATION

In the field of operative dentistry we run across several methods of desensitizing dentine, either for the purpose of cavity preparation, or for relieving pain from exposed or eroded dentine around the necks of teeth. One method for this has already been described on page five. The application of sodium fluoride has been found quite effective in obtunding exposed and hypersensitive dentine. Ogur (10) desensitizes dentine by placing a pellet of cotton

(9) Thompson, E. C.—Pg. 205-211 *Jnl. of Oral Pathology*, July 1945.

(10) Ogur E.—pg. 253-254 *Dental Outlook*, June 1943.

soaked with cocaine or procaine in the cavity, covering it with gold or platinum foil, and applying an electric current. A gradually increasing current is applied for about ten minutes, and gives sufficient desensitization for cavity preparation.

POST-OPERATIVE PAIN

Pain is a very frequent consequence of surgical procedures. Though such pain is not entirely unavoidable perhaps, it may at least be reduced. Care in separating tissue from the bone or tooth will help prevent traumatic pain due to tearing and laceration of the tissue. When "tidying-up" following extraction, make sure that all root tips, fragments of fillings, etc., are out of the socket. Trim all bone margins to prevent leaving sharp edges which promotes healing by first intention and prevents foreign matter getting into the socket. This may be aided by placing a sterilized gauze pack over the wound and having the patient bite on it for five or six minutes. Where it is doubtful that a blood clot will form, a surgical dressing such as iodoform gauze should be placed in the socket and renewed every 48 hours till healing is established. In spite of all precautions, the extremely painful so-called "dry-socket" will sometimes occur. In this case wash out the wound with warm sterile water, using an eye-dropper. Suck up the water again with the eye-dropper, place a soothing solution such as Russian oil 40%, camphor 40%, phenol 20%, and gently pack with a gauze dressing. Repeat this procedure till normal healing occurs.

DRUGS IN RELIEF OF PAIN

A complete thesis could be written on the uses of drugs in dentistry. I wish, however, to merely mention the chief ones and their application in relieving pain, without going into their pharmacological action. The use of barbiturates for premedicants or analgesia has already been mentioned. They are also useful in operative procedures on nervous or neurotic patients. The use of pentothal sodium as

a general anaesthetic has been given. A prescription combining aspirin, codeine, and phenacetin is frequently given to reduce post-operative pain. Post-operative pain, or pain from a "dry-socket" may also be diminished by the use of one of the obtundent drugs, or sulphathiazol powder. Drugs such as eugenol, cresatin, or dentalone are very useful in root-canal therapy to reduce pain in an exposed, infected pulp, and in giving a rest treatment to the tooth following pulp extirpation.

PSYCHOLOGY IN PAIN CONTROL

The application of psychology to dentistry has been receiving more and more attention in the past few years. This does not mean that it is necessary to psychoanalyze each patient. It does mean that the dental profession as a whole is beginning to realize that it must recognize each patient as an individual, and treat them as such. We can do much to assuage the fears of the nervous, apprehensive patient merely by having a neat, tidy office with tasteful, but not necessarily expensive furnishings. A calm and quiet as well as a professional manner, coupled with friendly interest on the part of the dentist, will instill a feeling of confidence in the patient. The feeling of pain is often accompanied by or is the result of fear, and may be considerably lessened by removing the fear from the patient's mind. We must not forget that, in some individuals, even an imagined pain may be very real to the patient. By telling the patient when something is likely to hurt, or when an operation is not going to result in pain, and being right, the patient will come to trust your skill, and will relax, confident that he is in good hands.

Some men have tried the use of hypnotic suggestion in their practice with varying results. This may be of assistance, but until the time that its effects have been proven and dentists are taught its use, it is unlikely to be of great value in the control of pain.

SUMMARY

The following methods, of those mentioned in this thesis, would appear to be the most satisfactory and effective methods at present available for the control of pain.

1. The use of sharp, small burs at moderate speeds and light pressures, with short periods of drilling, and the correct selection and use of sharp hand instruments.

2. Local anaesthesia for cavity preparations.

3. Local and general anaesthesia for surgical procedures.

4. Drugs, such as the barbiturates, for premedication and analgesia.

5. The application of psychology to the way in which we deal with our patients.

6. Ultimately, the Air-Dent Hand-piece when it has been more fully developed.

7. The dentist's skill and care, for in the final analysis the elimination and control of pain in dentistry depends on these. It is not enough to "freeze the jaw solid" with an injection of procaine. The prevention of pain rests on the application to each case of all our knowledge and training as practitioners of dentistry, and is only assisted by the above measures.

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ANNOUNCEMENTS

Maritime Dental Association

The Annual Convention of this Association under the auspices of The Nova Scotia Dental Association, will be held at Digby Pines Hotel, August 30 to September 2, Digby, N.S.

The 10th annual convention of the Northern Ontario Dental Association will be held on September 9 at Legion Memorial Hall, in Sudbury, Ontario.

The Eastern Ontario Dental Association Convention will be held at the Chateau Laurier Hotel in Ottawa, September 17, 18, 19. A good scientific program has been prepared as well as arrangements for golf and many social activities. Members and friends are invited to bring their ladies for whom a good program of entertainment is arranged.

The Forum

CARDIAC PROBLEMS IN DENTISTRY

by EMANUEL HELLMAN, M.D., New York, N.Y.

Condensed from Jour. of D. Med., April, 1950.

Mortality statistics of the U.S. Census Bureau show that cardiovascular disease is responsible for more than twice as many deaths as cancer—and, moreover, that its incidence is increasing in persons over the age of thirty.

In coronary and hypertensive patients the operative risk may be reduced almost to normal by observing the following precautions.

1. Prescribe a rapidly acting barbiturate, such as nembutal one and one half grains, to be taken an hour and a half before the dental appointment.

2. Do the dental work in stages.

3. End the session with the onset of pain.

4. Use local anaesthesia were possible. In the type of patient under consideration it is recommended that epinephrine be omitted from the procaine solution.

I am convinced that proper pre-operative sedation, combined with repeated injections of procaine when necessary, will suffice to maintain anaesthesia for twenty to thirty minutes without the use of epinephrine. If the operation requires a longer period then it should be done in a hospital under general anaesthesia.

It has been conclusively demonstrated that tooth extraction in any person may be followed by transient bacteremia. Whereas in the normal individual this transient bacteremia is soon overcome, the cardiac patient with diseased valves offers a lodgement focus for these bacteria with the con-

sequent danger of the development of subacute bacterial endocarditis.

Recognition of the oral cavity as such a portal of entry was naturally followed by attempts at prophylaxis. The use of cautery and curettage in an effort to prevent escape of organisms into the blood stream has not been successful. Prophylactic administration of sulpha drugs yielded equivocal results and cases of subacute bacterial endocarditis have been reported following their use. The use of prophylactic penicillin followed naturally upon the brilliant results achieved with this antibiotic in the treatment of the disease itself, with reduction in mortality from almost 100 per cent to 30-40 per cent.

It is therefore extremely important that certain prophylactic measures be observed in treating a patient with rheumatic or congenital heart disease. These may be summed up as follows:

- A. The first responsibility rests with the physician, whose duty it is to acquaint the patient and his dentist with the nature of the condition and the need for prophylaxis.

- B. Only one tooth should be extracted at a time.

- C. Adequate penicillin prophylaxis should be administered.

- D. Since it has been shown that positive blood cultures follow not only after extraction but also after manipulation, and even after the act of chewing, the first prophylaxis calls for scrupulous oral hygiene and the

removal of all pulpless and infected teeth.

In the average systemic disease efforts to save teeth, even in the presence of infection, are justified, since causal relationship between the systemic disease and the focus in the teeth cannot be established in most cases. In the case of subacute bacterial endocarditis, however, undisputable evidence that such causal relationship exists has been presented. It therefore becomes mandatory that, in patients with congenital or rheumatic heart disease, all infected teeth should be removed. In the case of the pulpless tooth, the crux of the difficulty lies in our inability to determine the presence or absence of periapical infection by any of the methods at our disposal.

There is general agreement that the clinical diagnosis of such infection is extremely unreliable.

With the use of penicillin prophylaxis in these cardiac cases I am unable to find any case reported of the development of subacute bacterial endocarditis following tooth extraction. Penicillin should be administered in a manner designed to attain the highest blood levels at the time of extraction, with the maintenance of adequate levels for the next 48 hours. Our own preference is to give 600,000 units of aqueous procaine penicillin in one injection daily for two days before and two days after extraction; and to fortify this with 600,000 units of penicillin in saline, without procaine, one hour before extraction.



THE ADVISABILITY OF ORTHODONTIC TREATMENT IN DECIDUOUS AND MIXED DENTITIONS

by CHARLES R. BAKER, D.D.S., Evanston, Illinois

Conclusions of paper in F. Review of Chicago D. Society, April 15, 1950

The development of the teeth, jaws and their associated structures in the lower portion of the face is a complicated process. Many different tissues, including fifty-two teeth, are involved in the growth and development of this area. This development occurs in a very busy part of the body. Normally the tongue, lips and cheeks are active a great deal of the time. It is estimated by competent authorities that in ordinary conversation the tongue makes about twelve hundred movements per minute.

There must be proper coordination and synchronization in the development of all the tissues involved in the dentofacial area. If only one of the developing units is abnormal in growth and function and out of harmony with other elements, the result will be a deformity in some degree.

The facial development of an individual is influenced to a large degree by the size, form and relationship of the underlying dental structures. Normal occlusion of the teeth, therefore, is an important influence in normal facial development.

Orthodontic treatment early in the development of this area is recommended to correct incipient malocclusion and to provide an opportunity for the subsequent development to proceed normally. At the age of twelve or thirteen years all the permanent teeth, except third molars, have erupted and it is then too late to practise *prevention and interception of malocclusion*.

Deciduous teeth should receive the same expert care as the permanent teeth. Cavities should be properly filled so that the corrective size and contour of each tooth is restored. If a deciduous tooth is lost prematurely, the use of a suitable space maintainer frequently is indicated. Deciduous

teeth should be extracted if necessary, at the correct time.

Many common habits, such as thumb sucking, lip biting, tongue pressure and abnormal respiration, may interfere with normal development of the dental apparatus. The dentist should give proper advice regarding the breaking of such habits. Myofunctional exercises should be prescribed when indicated. Accurate records should be kept if developing malocclusion is suspected.

Early treatment of malocclusion in the deciduous and mixed dentitions is essential for the best possible end result. Usually orthodontic treatment entails movement of the roots of teeth through the alveolar process. If treatment is postponed, there will be a more mature development of the investing tissues as well as all other tissues associated with the jaws, which have grown in harmony with the malocclusion present. At this time the teeth will not move as readily as in younger patients, and after corrective treatment is concluded, the necessary readjustment of all tissues involved will not be as rapid as if treatment had been applied earlier, and in many instances the final results of occlusion and of facial development will leave much to be desired.

The deciduous and mixed dentitions, together with their supporting structures, are the foundation for the permanent masticatory apparatus and facial development. If this foundation is abnormal, we may expect similar deformities in the permanent dentition and in mature facial development.

It is generally believed that a large percentage of cases of malocclusion in the permanent dentition could have been prevented. The dentist in general practice, who usually sees the patients

first, should assume the responsibility of carefully observing developing deciduous and mixed dentitions. He should be qualified to recognize ab-

normal development and to give correct advice regarding prevention and interception of malocclusion—this is his obligation.

A COLLEGE TRAINING PROGRAM FOR DENTAL ASSISTANTS

by MERRILL J. SHEPRO, B.S., D.D.S., M.S., Berwyn, Illinois

Condensed from Fort. Review of Chic. D. Soc., May 15, 1950.

The dental profession, absorbed as it must be in the progress of raising its educational standards, has sometimes failed to give adequate consideration to the education and training of its auxiliary personnel. The high standards of the medical auxiliary personnel attest to the importance of this basic consideration. It is important therefore that the dental profession also require a high standard of training for the dental assistant.

The ideal dental assistant should meet the following qualifications:

(1) She should be an educated person. She should have an understanding of the value of education and a respect and desire for the acquisition of knowledge. Her academic training, therefore, must extend beyond the high school level.

(2) She should be well trained in the fundamentals of dentistry and the related basic sciences.

(3) She must be well trained in the theory and practice of the duties she should be able to perform.

(4) She should be specially trained to assume the following responsibilities: To assist the dentist in his operative procedures to a degree that she is able to anticipate his needs rather than to wait for orders. To accept complete responsibility for the business management of the office and appointments, records, and accounts of patients. To perform specific duties in educating patients in oral hygiene, oral health, and the appreciation of good dental treatment. To act as the personal representative of the doctor to his patients and to the public. To work with the doctor rather than for the doctor in his practice, and to contribute to the building and maintain-

ance of his practice. To be able to execute properly a wide range of laboratory procedures such as making and articulation of models and dies, and construction of dental restorations and prosthetic appliances.

(5) She should be trained in the field of human relations.

(6) She should have a clear knowledge of her limitations and her abilities; and she should have a high respect for her profession and her social position.

(7) She should have a thorough understanding of professional ethics and responsibilities.

(8) She should possess the qualities of loyalty, reliability, and responsibility as well as the usual facets of good character and personality.

Since the fall term of 1948, a two-year college curriculum in dental assisting has been given at Morton Junior College in Cicero, Illinois, (a suburb of Chicago).

For thorough training and experience in dental assisting, combined with an understanding of the basic sciences, and a liberal college education, the two-year college academic course has been established. This course combines didactic and laboratory instruction, and clinical experience and leads to a two-year college degree and a certificate as a graduate dental assistant. The objective of this program is to produce auxiliary personnel of the same degree of training and education for the dental profession as the graduate nurse is for the medical profession; and to make the dental assistant a true assistant, not merely an office housekeeper.

In order to provide an educational background for those who are already

employed as dental assistants, and who are not able to return to college for a full-time program, a series of forty evening lecture and laboratory sessions is offered. The purpose of this program is to provide a background in dentistry to those who are engaged in

fields related to dentistry, and to serve as a compromise with the ideal two-year college curriculum in anticipation of the time when all dental assistants will be required to have formal college training, a certificate as a graduate dental assistant, and possibly even a state license for practice.

THE TOXICITY OF FLUORIDES IN RELATION TO THEIR USE IN DENTISTRY

by GERALD J. COX, Ph.D., Pittsburgh and
HAROLD C. HODGE, Ph.D., Rochester, N.Y.

Summary of paper in Jour. of A.D.A., April, 1950.

1. The possible hazards attendant on the use of fluorides in dentistry have been discussed. The most important applications of fluoride at present are (a) fluoridization of water, (b) topical use of concentrated solutions, and (c) fluoride paste used to desensitize dentine. Other uses of fluoride are cited that are, at present, not therapeutically important.

2. Two per cent solutions of sodium fluoride as used for topical applications are perfectly safe when the application is made in the dental office. The two per cent solution is too toxic to be kept in homes and should never be prescribed.

3. Chronic, crippling fluorosis will never appear as a result of dental uses of fluorides.

4. Mottled enamel, the most delicate sign of fluoride toxicity, will be found when fluoridization is carried out at

about 1 ppm. of fluoride only in a very few individuals in whom very mild mottling will occur. No unaesthetic marring of the teeth should occur.

5. Persons drinking communal water supplies containing about 1 ppm. fluorine conceivably might increase the fluoride intake by daily accessory fluoride administration to a level sufficient to cause mottled enamel.

6. There is no other known toxic effect of drinking water containing 1 ppm. fluorine than the "very mild" mottling of the teeth.

7. Repeated local applications of fluorides on soft tissues, for example, the skin of the fingers, has produced dermatitis in a single recorded case.

8. Concentrated preparations of sodium fluoride have been shown to produce pulpal reactions when applied to freshly cut dentine for desensitization.

FLUORINE AND WARTIME DIET

by ROBERT WEAVER, M.D., F.D.S. R.C.S. Eng.

Summary of paper in Br. D. Jour., May 5, 1950.

(1) In the autumn of 1943, 500 children aged 5 years, and 500 aged 12 years were examined.

(a) in North Shields, which is a "non-fluoride" area, and

(b) in South Shields, which has a water supply containing 1.4 p.p.m. of fluorides.

Investigations on the same lines

were carried out in these two towns in the spring of 1949 in order to see whether wartime diet had reduced the incidence of caries during the intervening five and a half years.

(2) In North Shields the average number of DMF (decayed, missing, filled) deciduous teeth per child aged 5 years was 33 per cent less in 1949

than in 1943. The average number of DMF permanent teeth per child aged 12 years was 44 per cent less.

(3) The average DMF figure (2.4) for North Shields 12-year old children in 1949 was the same as the figure recorded for South Shields 12-year old children in 1943. Nevertheless, the number of DMF permanent upper incisors found in 500 North Shields children aged 12 years in 1949 was 95, whereas the corresponding South Shields figure for 1943 was only 17. When caries inhibition is produced by wartime diet it does not apparently have that peculiarly selective inhibitory effect on caries of the permanent incisors which is so constant a feature of "fluoride areas."

(4) In South Shields the average number of DMF deciduous teeth per child aged 5 years was only about 10 per cent less in 1949 than in 1943. On the other hand, the average number of DMF permanent teeth per child aged 12 years was 46 per cent. It is not clear why there was such a small cumulative effect of fluorides and wartime diet on deciduous teeth in South Shields.

(5) A similar investigation was carried out in 1949 in West Hartlepool where the domestic water supply contain 2 p.p.m. of fluorides. (No figures are available for West Hartlepool for 1943). The caries incidence in West Hartlepool 5-year-old children was found to be only about half that which was found in South Shields 5-year-old children. In West Hartlepool 12-year-old children there was on average less than 1 DMF permanent tooth per child—the figure being lower by 26 per cent than that for South Shields 12-year-old children.

(6) Examination of 100 mothers attending infant welfare centres in West Hartlepool revealed a high incidence of dental fluorosis. Although 2 p.p.m. of fluoride in West Hartlepool water appeared to have a considerably greater caries-inhibitory effect than the 1.4 p.p.m. in South Shields, the incidence of enamel pigmentation in West Hartlepool adults was so high as to rule out any idea that drinking water should ever be artificially fluorinated to a 2 p.p.m. level.

LACTOBACILLI: CAUSE OR EFFECT OF DENTAL CARIES?

Condensed from Editorial in N.Y. State D. Jour., May, 1950.

The conclusion generally drawn in the past was that lactobacilli caused dental caries. But another conclusion appears equally justifiable, viz., that lactobacilli are not the cause but are only an accompanying phenomenon of dental caries. The latter view is strengthened by the fact that the observed correlation existed only when the figures representing the number of lactobacilli present in each mouth were averaged for an entire group.

Whether lactobacilli are the cause or an accompanying phenomenon, the greater the number or extent of carious areas, the larger one would expect the number of microorganisms to be. But the fact is highly significant that Boyd observed some individuals with low lactobacillus counts and extensively active caries, while others had very high counts and little caries.

It seems evident from these experiments that an excessive number of salivary lactobacilli was not the essential causative factor in dental caries.

The writer in the past has drawn a facetious analogy of the relationship of lactobacilli to caries but has not heretofore dared to mention it publicly. The report of Boyd and his associates, however, has given him new courage. The analogy concerns a horse which dies of sunstroke. It lies for hours on the hot city street and is covered with flies. Passers-by see the animal and the flies and say: "The poor horse has been killed by flies."

Are the lactobacilli found in carious teeth the cause of dental caries or are they the "flies" that accompany the disease?

ANNOUNCEMENTS

26th Annual Fall Clinic—Montreal Dental Club

The Fall Clinic will be held October 18, 19, 20, 1950. A partial list of clinicians appears below:

"Practical Psychology and Operative Procedures for the Child Patient," by Alfred E. Seyler, B.S., D.D.S., F.A.C.D., Detroit, Mich.

"Lesions of the Soft and Bony Structures About the Mouth and Jaws," by George W. Christiansen, A.B., D.D.S., M.S., Detroit, Mich.

"Occlusal Equilibration," by William G. McIntosh, D.D.S., Toronto.

"Alginate Base Hydrocolloids for Crown and Bridge Procedures," by Kenneth R. Pfeiffer, D.D.S., Washington, D.C.

Progressive Clinic: "Practice Management," by Wallace N. Kirby, B.S., D.D.S., Chicago, Ill. This will be divided into three sessions covering: 1) Presentation of dental service; 2) Appointment handling and office records; and 3) Common office problems.

Those not on the mailing list who wish to receive the program, please write to Dr. J. W. Abraham, 4018 Royal Ave., Montreal, Que.

Continuation Courses for Graduates in Dentistry at Univ. of Toronto

The Faculty of Dentistry, University of Toronto announces a series of short intensive courses for dentists during the 1950-51 session, arranged and conducted by the staff of the Faculty with the co-operation and financial support of the W. K. Kellogg Foundation of Battle Creek, Michigan. Outstanding visitors will be included among the lecturers and clinicians.

Instruction will be given through lectures, seminars, and clinical demonstrations. The fees for the courses will be \$75.00 for a five-day course and \$50.00 for a three-day course.

ANATOMY AS APPLIED TO DENTISTRY:

September 13, 14, 15, 1950. 9:00 a.m. - 5:00 p.m. Enrolment limit 6. Under direction of Professor J. C. Watt. Tuition Fee, \$50.00.

PERIODONTICS:

September 25 - 29, 1950. 9:00 a.m. - 5:00 p.m. Enrolment limit 14. Under direction of Doctors H. K. Box and C. H. M. Williams. Tuition Fee, \$75.00.

ORTHODONTICS (for the general practitioner):

November 6 - 10, 1950. 9:00 a.m. - 5:00 p.m. Enrolment limit 10.

CEPHALOMETRIC TECHNIQUES (for specialists only):

November 16, 17, 18, 1950. 9:00 a.m. - 5:00 p.m. Enrolment limit 10.

DENTAL PUBLIC HEALTH CONFERENCE:

November 16, 17, 18, 1950. 9:00 a.m. - 5:00 p.m. Enrolment limit 15.

OPERATIVE DENTISTRY:

February 19 - 23, 1951. 9:00 a.m. - 5:00 p.m. Enrolment limit 10.

DENTAL RADIOLOGY:

February 26 - March 2, 1951. 9:00 a.m. - 5:00 p.m. Enrolment limit 12.

ENDODONTICS:

March 12 - 16, 1951. 9:00 a.m. - 5:00 p.m. Enrolment limit 8.

ORTHODONTICS (for the general practitioner):

April 9 - 13, 1951. 9:00 a.m. - 5:00 p.m. Enrolment limit 10.

PEDODONTICS:

April 16, 17, 18, 1951. 9:00 a.m. - 5:00 p.m. No enrolment limit.

DENTAL ORAL SURGERY AND ANAESTHESIA:

April 23 - 27, 1951. 9:00 a.m. - 5:00 p.m. Enrolment limit 12.

PERIODONTICS:

April 30 - May 4, 1951. 9:00 a.m. - 5:00 p.m. Enrolment limit 14.

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Editorial

AUXILIARY SERVICES

At the request of the distinguished Dean of the Faculty of Dentistry of McGill University we are publishing in this issue of the Journal a letter from himself addressed to the editor and an article entitled the "Kiss of Death" dealing with the subject of the Dental Hygienist also by request of the Dean. These articles prompt editorial comment.

In the year 1913 your editor became enthused over the idea of developing a strong body of auxiliary helpers in the form of dental hygienists when visiting Dr. A. C. Fones of Bridgeport, Connecticut, the father of this movement, and has made every effort to popularize the idea ever since. In Dr. Fones' school twenty-seven hygienists were graduated in 1914. Other schools followed until now in 1950 there are sixteen recognized schools in the U.S.A. offering training for this type of service. Forty-five states and the District of Columbia have passed laws governing the activities of these auxiliary helpers. All ten provinces of Canada, with possibly the exception of British Columbia and Newfoundland, have either obtained legislation, or are endeavouring to obtain the same, regulating the activities of the dental hygienist.

For many years following 1914 the effort put forth in Canada to gain recognition of this movement was unfruitful. Imagination was cold and barren. We were yet in the gristle and not hardened into the bone of manhood. The service of the dental hygienist was looked upon as a doubtful theory. Many seemed to say, "So far shall thou go and no farther".

The real question is as to whether or not we have the right to deprive the people of Canada of this service, whether or not humanity, reason, and justice tell us that this is what we ought to do.

To me the program is clear and indisputable. For some years I had the privilege of being able to employ a hygienist and it was disturbing, to say the least, when the time came that it was no longer possible to continue this practice. Then again as one looks into the mouth of a new patient, particularly in hospital service, how often does one find a condition demanding the service of a hygienist before proceeding with the examination or any reconstructive work! Now that this service appears to be within reach in Canada after thirty-five years of waiting, this writer feels something of a spirit of liberty, feels fortunate that he has lived to see the promised land, even though on account of the ravages of time he may not personally be able to enter the land.

The properly trained hygienist will render the dentists' patients a health service of the highest type. She will be trained to recognize the earliest signs of disease in the mouth, not to treat the same. She will give prophylaxis and teach tooth-brushing technique and other educational necessities. She will be able to give fluoride treatments if that be considered advisable. She will be able to assist the dentist in many ways not necessary to mention here, and this apart from her even greater contribution to national health in schools and institutions. Surely after two years training in this specialty she will be able to take care of any problem arising in gingival infection in the course of an ordinary prophylaxis and she should be able to recognize any unusual problem which, of course, would be referred at once to the dentist.

When one considers the type of service rendered by the medical nurse and expected by the modern physician one is impressed by the fact that these services open up opportunities for serious mishap, in case of carelessness, to a far greater degree than could possibly exist in the service rendered by a dental hygienist. And certainly the medical profession is not becoming degenerate nor is it losing prestige, or dignity, or becoming less highly thought of in the eyes of the public on account of these auxiliary helpers.

We can quite agree with Dr. Kaufmann in his article entitled the "Kiss of Death" when he says that in the rendering of a health service the public welfare is paramount, but we take strong exception to the statements and inferences that these hygienists are inadequately trained and that the average dentist will do a better job at giving prophylaxis and in stimulating good health ideas in the minds of our children, than will the hygienist whose whole training is to do just that. The hygienist as a class has lived close to her ideals and has really brought adornment and grace, and dignity to the dental profession and not the "Kiss of Death".

To refer to them as bringing about a degeneration in dentistry, of being nothing but lower belt-liners leading our children into barren mediocrity is, in the view of this writer, simply a complete lack of understanding of this

whole movement or what it means to both public and the dental profession.

That this movement should be kept under the strict control of the dental profession goes without saying and this applies to all auxiliary helpers. To lose control would be disastrous. This applies also to other auxiliary helpers such as technicians and dental nurses or assistants. Too often when problems arise in these fields we wash our hands of the whole affair as did Pilate a couple of thousand years ago and say to the leaders of these groups "See ye to it". When trouble eventually arises under these conditions we have only ourselves to blame.

Under proper direction the dental hygienist has a wonderful service to render and should be encouraged in every way possible. If the course of training is not adequate, let us make it so. If the laws are defective, let us take care of that also. Right now the problem has become one for our universities to deal with and let us hope that they will meet these demands with all the enthusiasm and efficiency possible.

Someone has said, "We are today where our efforts have brought us, we will be tomorrow where our efforts take us. We will be as small as our controlling desires or as great as our dominant aspirations."

Some lines from Ulysses seem not irrelevant:

"Tis not too late to seek a newer world.

Push off, and sitting well in order smite

The sounding furrows; for my purpose holds

To sail beyond the sunset, and the baths

Of all the western stars, until I die."

M. H. G.

CORRESPONDENCE

DENTAL HYGIENIST

To the Editor:—

For some time I have had serious doubts as to the result in time, of the dental hygienist. The meeting of the Association of Dental Schools confirmed these doubts.

In order that I may present my stand I submit the following excerpt from a letter to Dr. A. G. Racey as my opinion:—

The profession of dentistry has had a long and constructive development from the era of the blacksmith and barber, through the period of restorative technical skill to the present position of having become a biological science closely allied to the medical profession.

All dental operations directly upon the patient involve the knowledge and skill of surgery or of orthopaedics (orthodontia) and tissue physiology (prosthesis and its sequelae).

In order to protect the patient we have found it necessary to increase the knowledge possessed by the student before he is given a

license to practice dentistry. I question the possibility of adequate protection of the patient by allowing the dental hygienist to perform the operation known as dental prophylaxis involving as it must, the usually infected tissues of the gingival sulcus. It is said that a dentist will supervise the work of the hygienist. In the United States many dentists have several hygienists working for them individually. How can there be adequate supervision in such a case? Can we be quite sure that the dentist will not extend the activity of the hygienist to the insertion of periodontal packs, temporary fillings and the adjustment of denture margins, etc? Will it not be a temptation to leave the hygienist in full charge of patient treatment while the dentist is absent on vacation or playing golf, etc?

It is a serious menace to the integrity of the dental profession to permit any but dentists to operate directly upon the patient. In

substantiation of this I quote the following:—

"The Dental Practice Act in Massachusetts has been amended to permit an extraordinary research training program for dental hygienists. These hygienists will be given a special two-year course, upon the completion of which they will be licensed to practice as hygienist with the additional privileges of *preparing and filling cavities and extracting teeth for children.*"

"The training and licensure of hygienists to fill and to extract teeth will create a sub-dentist group, break down the standards of dental education and open the profession to invasion by great numbers who, with inadequate training will take over more and more of the dentist's duties and responsibilities."

Is this not the insidious shadow of things to come? We must oppose this menace at its source. Here in Canada, at least, let us reserve to the dentist alone the right to operate directly upon the patient.

You may be told that government pressure requires that the C.D.A. present some alternative and constructive proposition to improve the care of the teeth of children. Very, well,—permit me to respectfully present the following suggestion:

Through appropriate high-level channels prepare to have all Provincial Licensing Boards agree—

That all dental graduates must serve some Canadian Province in clinics or hospitals in the care of the dental tissues of children for one year on salary before being given the right to private practice. In order to practice Dentistry, the applicant must have satisfied all of the Provincial Laws in the specific Province in which he proposes to practice and possess a certificate of having served an internship for the required time in a recognized Clinic or Hospital.

In this way, young dentists would treat the children, and the profession would grow into a new attitude to this problem. The dentist would approach private practice with added experience, a more mature outlook and I would hope, a better professional feeling for the society which he is to serve and of which he is a vital part.

I heartily approve of trained dental assistants who will be instructed in the principles of asepsis, sterilization, knowledge of dental instruments, supplies and office rou-

tine, but I object to any direct operation on the mouth of the patient by any persons other than dentists, physicians or surgeons.

Permit me to say that the article on page 259 of the May issue of the Journal presents the dentist as nothing more nor less than a "business" man. In order that the other side of the picture may be presented, I enclose the Bulletin of the New York State Society of Dentistry for Children and would respectfully suggest that you publish their article the "Kiss of Death."

(Signed) D. P. Mowry,

Dean,

Faculty of Dentistry, McGill University

KISS OF DEATH

In the rendition of a health service such as is offered by the dental profession, the public welfare is paramount. When measuring the advisability of any plan whereby people can be helped to better health, the self-interest of those who are doctors is unquestionably secondary. Indeed, the ideal objective of our profession should be to eliminate the necessity for its own existence. Complete dental health for every child is an ultimate goal which may never be attained; nevertheless, no one can deny that under any circumstances the best is not good enough for the mouth of a child. Until that time when we will have reached the zenith of absolute prevention, until that day when a profounder knowledge gives us full security, the most effective means we will have in our effort to overcome dental disease and deformity will be the practice of dentistry for children. Only the finest dental care by the proficient graduate dentist in general practice, initiated with the foundation teeth of the pre-school child, will suffice.

When our profession has a task to perform it must put its best foot forward. In the so-called "experimental research" now being conducted in the State of Massachusetts, we see the continuation of the earlier beginnings of lower level dentistry. The origin of that decadency, in this writer's personal opinion, was consummated by the critical, historical error which created the inadequately trained dental hygienist as a miscalculation, substitute operator in the child's mouth. Despite eminent and enthusiastic majority approval, the minority dissenters held their ground: we clung fast to our fundamentally sound assertion that the way to solve the problem of dental care for

children was not by the creation of inferior lower level practice, but rather by maintaining vigorously the concept that only the best should be given to every child. We contended that proficient graduate dentists alone are the ones capably fitted to operate in the mouths of children for any dental purpose whatever. We further constructively held that the dental hygienist, who is neither fish nor fowl, should be given a higher dignity and greater usefulness by making her a competent mouth health teacher with a full collegiate education and an appropriate academic degree. We dissenters pleaded in vain; and now some of our New England colleagues are using this very dental hygienist—originally pledged to do no more than "simple prophylaxis above the gum line"—as a handle to another type of lower level invasion. If "satisfied," those adherents with the legal authority and political influence in Massachusetts will press into the field of public service a two year trained young woman for the insertion of "simple fillings in children's teeth, under the supervision of registered dentists." Two years!—why actually in two months time we could teach a garage mechanic who never saw the inside of a high school how to put "simple fillings in children's teeth" in precise, factory-like fashion.

If eventually this devitalizing thrust at child

welfare and professional progress is put into operation, it goes without saying that the next immediate downward step will be the prompt legalization of the dental mechanic to take "simple impressions under the supervision of a registered dentist." Naturally enough, the dental mechanic will argue that if the one is good, so is the other. Then step by step will we degenerate, until nothing is left of the "supervision by registered dentists," or, for that matter, of dentists. Meanwhile are we to gaze in frozen silence upon the amorous osculations of the lower level belt-liners who would regimentally lead our children into barren mediocrity under the capitivating slogan of inexpensive mass production? Shall we wait to hear the last dying gasp, to behold the final convulsive twist of what was once a creditable, progressive and forward looking profession? Though the lips are enticing, the contact is fatal. We dislike cheap flag-waving; but this is the United States of America, and not New Zealand or Russia, and it is the wholesome and inspiring American way to pull from beneath upwards and not to push from above downwards. Surely it is not too late. *It must not happen here.*

Joseph H. Kauffman in Bul.
of N. Y. State Soc. of
Dentistry for Children.

BOOK REVIEWS

Endodontia by Bernhard Gottlieb, M.D. (University of Vienna), D.M.D. Hon. (University of Bonn), LL.D. Hon. (Loyola University, Chicago), Professor of Oral Pathology and Dental Research, Baylor University College of Dentistry, Dallas, Texas; Honorary Member of the American Association of Endodontists; Formerly Professor and Head of Department of Histologic Research, College of Dentistry, University of Vienna; and Seth Lee Barron, D.D.S., Assistant Professor of Root Canal Therapy, Baylor University College of Dentistry, Dallas, Texas; and J. Hobson Crook, D.D.S. Associate in Dental Research, Baylor University College of Dentistry, Dallas, Texas. 177 Pages. 103 Illustrations. Published by C. V. Mosby Company, St. Louis, Mo. Canadian agents: McAlinsh & Co. Limited, Toronto. Price \$7.00. In the preface, the authors consider the

problem of the pulpless tooth to be a contentious one until indisputable proof is supplied to prove that it can be rendered harmless to the body as a whole. The present volume is a report of their experimental work on dogs and humans over the last thirteen years. The book is a presentation of biological reactions to the manifold aspects of the endodontic problem, not the least of which is establishing the fact that new, living cementum can be laid down over necrotic cementum; a point that is of vital interest to the periodontist as well.

There is a minimum of descriptive techniques of mechanical procedures, the emphasis being placed on tissue reactions.

The many illustrations, especially the photomicrographs are very clear and well executed.

On the other hand the bibliography of twenty one items leaves something to be

desired as a more extensive list here would enhance this work as an undergraduate text.

H. A. HUNTER, UNIV. OF TORONTO

Klinische Zahnheilkunde Und Ihre Grenzgebiete (Clinical Dentistry and its related sciences), by Dr. Peter Paul Kranz. 553 pages, with 556 black and coloured illustrations and photographs; and 10 plates; fourth edition. Carl Hanser/Verlag/Munchen 1949—28.50 D.M.

The author in the preface to his book on Clinical Dentistry emphasizes the inter-relationship that exists between oral and systemic diseases; and in the twenty chapters that follow deals with this subject in a practical and comprehensive manner.

The subject material presented covers oral anatomy, dental embryology and development, dental physiology, internal secretions, vitamins, dental caries, certain bone diseases, pulp diseases, specific mouth diseases, pyorrhea, focal infection, blood dyscrasias, nerve disorders, oral malignancies and dental cysts.

Because of the growing significance of antibiotics in the treatment of oral diseases, a chapter on chemotherapy is included in this fourth edition. A few pages are also devoted to describe briefly dental medicaments and remedies.

This book is profusely illustrated and although the photographs in general are not very clear, they lead to a better understanding of the many interesting clinical conditions presented.

It is a good reference book on clinical dentistry for the student and general practitioner of dentistry.

J. KREUTZER, D.D.S.

A Textbook of Oral Hygiene and Preventive Dentistry, by Russel W. Bunting, D.D.Sc., Professor of Dentistry and Dean of the School of Dentistry, University of Michigan and Collaborators. 240 Pages, 134 Illustrations and a Colour Plate. Published by The Macmillan Company of Canada. Price \$6.00.

The author of this book pays tribute to the classic textbook on Oral Hygiene by Alfred C. Fones and points out that since the last revision of Fones' book great advancement has been made in the knowledge of dental diseases and the means of their control, and that the value and scope of the

ancillary service of the dental hygienist, which was initiated by Dr. Fones, have now become more apparent and significant.

For this book the following prominent authors were selected: Lester W. Burkhart of Univ. of Pennsylvania; Lester R. Cahn of Columbia Univ; Dorothy G. Hard, Philip Jay and Donald A. Kerr, Univ. of Michigan; Hamilton B. G. Robinson, Ohio State Univ. and Jacob M. Wisan of Ft. Hamilton Veterans' Administration Hospital, Brooklyn, N.Y.

The following subjects are discussed: Oral Hygiene, Histology and Physiology of the Oral Structures; Accretions on the Teeth; Caries; Periodontal Disease; Traumatic Occlusion; Stomatitis; Prophylaxis; Oral and Systemic Disease; Public Health Dentistry; The Dental Hygienist.

It has been well said that to reconstruct the mouth by means of bridges, fillings, etc. and neglect the surrounding tissues, is like building a house upon the sand. It cannot endure.

This is a very profitable book for study.

M. H. G.

Acrylic Inlays, Crowns and Bridges

by Irwin Robert Levy, D.D.S., Formerly Director, American Training Institute; Chief of Dental Clinic, Big Sisters' Organization; Assistant Dentist, Mt. Sinai Hospital, New York City; Director, Dental Division, Eastern School for Physicians' Aides. 128 pages with 151 Illustrations. Published by The Macmillan Company of Canada, 70 Bond Street, Toronto. Price \$4.50.

The purpose of this book is to attempt to resolve some misunderstandings which have arisen and to present, concisely and clearly, the author's own clinical experience, as well as the findings of others who have derived satisfaction in the production of successful resin inlays, crowns and bridges.

The subject is discussed under the following headings: Inlays, Crowns, Bridgework, Processing, and Colour. Self-curing plastic fillings are discussed briefly. The author states that cavity preparation similar to that used for silver amalgam and silicate fillings is ideal, but many have found that some variation from this method quite necessary. The author also states that the matrix should remain in place for ten minutes when it can

be removed and the plastic filling finished and polished.

Here again one notes that in the treatment of some of the new products it is advisable to wait longer than ten minutes before polishing. However, in the better established procedures of dealing with acrylics one can find many practical and helpful suggestions in this book. M. H. G.

Oral and Facial Cancer by Bernard G.

Sarnat, M.D., F.A.C.S., Professor and Head of the Dept. of Oral and Maxillofacial Surgery, College of Dentistry, Univ. of Illinois; Diplomate of the American Board of Plastic Surgery and Isaac Schour, D.D.S., Ph.D., Sc.D., Professor and Head of the Dept. of Histology and Associate Dean in charge of Postgraduate Studies, Univ. of

Illinois. 300 Pages. 118 Illustrations. Published by the Year Book Publishers, 200 E. Illinois St., Chicago 11. Price \$6.00.

Cancer is a leading cause of death. Research in this field has been greatly augmented in the last four years and dentistry has its part to play in this program. The dentist must be able to recognize early cancer and be alert regarding it.

This book is designed to meet a growing demand for a guidebook and survey of the field of oral and facial cancer and related conditions. Selected case histories are presented to illustrate the characteristics of various types of tumours. A careful perusal of this well written book by two distinguished leaders in this field should help the dentist in assuming his responsibility for the prevention and diagnosis of oral disease of both local and systemic origin. M. H. G.

ROYAL CANADIAN DENTAL CORPS NEWS

Presentation of Trophy:—During the recent convention of the Canadian Dental Association the accompanying trophy was presented to Colonel E. M. Wansbrough O.B.E., M.M., E.D., Director General Dental Services who accepted it on behalf of the Royal Canadian Dental Corps. The occasion of the presentation was at a dinner of the Defence Dental Association on May 16 at the Royal York Hotel.

The cup is engraved, "The Moore Trophy", surmounted by "The Royal Canadian Dental Corps Crest" and on the reverse side is inscribed "For Annual Competition."

This gesture on the part of Dr. Moore climaxes his great interest in the Corps which underwent re-organization during his term of office as president of the Canadian Dental Association. As an honorary officer of the Corps and a past chief executive of the Canadian Dental Association, Dr. Moore, in making this gift, has cemented a bond of mutual interest and co-operation between both organizations. The cup is given for annual competition between the Reserve Dental Companies and will be presented to the unit judged most efficient on a yearly basis.

New Dental Companies:—Authority has been received to form a fourth Active Force Dental Company to be designated 14 Company RCDC (AF) with Headquarters in Winnipeg, Manitoba (Prairie Command), effective 28th June, 1950.

Authority has also been given to form two new Reserve Force Dental Companies, No. 9 Coy RCDC (RF) with Headquarters in Calgary, Alberta and No. 10 Coy RCDC (RF) with Headquarters at Saskatoon, Saskatchewan.

TROPHY PRESENTED TO ROYAL CANADIAN DENTAL CORPS BY HONORARY LIEUTENANT - COLONEL STEPHEN A. MOORE



CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

C.D.A. Purchases Headquarters Property:—Under direction given at the recent Annual Meeting purchase has been made of a property, for headquarters purposes, on St. George Street in the City of Toronto. Plans are under way for necessary alterations and it is expected that the headquarters will be occupied this fall.

The Board of Governors agreed to set up a special fund of \$75,000 to be known as the Housing Fund and gave direction to the Executive to proceed in purchasing a property when an amount considered sufficient had been received. The Executive, in turn passed a resolution stating that when \$40,000 had been obtained for the Housing Fund the President and Secretary were empowered to make purchase. The Housing Fund is to be administered separately from the Association budget and special grants to this fund are anticipated from the Provincial Corporate Members or any other available sources.

Immediately following the Annual Meeting the necessary minimum amount became available through a grant from Ontario and the Association was placed in a position to take action. Indications have been made that other Corporate Members will make grants to the Housing Fund in the near future.

Fluoridation of Communal Water Supplies:—As a result of new evidence from experimental projects where communal water supply has been fluoridated for a period up to five years or more the U.S. Public Health Service has altered its basic policy toward fluoridation to read, "Using scientific methods and procedures, communities desiring to fluoridate their communal water supplies should be strongly encouraged to do so". Assistant General Bruce D. Forsyth states that a recent analysis of data from the Grand Rapids Experimental Project in Michigan regarding six, seven and eight-year-olds reveals that their caries experience and expectancy is the same as that found in individuals of the same age group who have been receiving 1. to 1.5 p.p.m. of fluorides naturally in their drinking water over the same period of time. He said, "One can now predict that next year, the nine-year-olds, when examined, will have dropped to this same curve; the following year, the ten-year-olds, etc."

Consequent to the issuance of this statement, State Dental Directors at their

meeting held in Washington, unanimously recommended the fluoridation of public water supplies for the *partial* control of dental caries. The adopted resolution urging fluoridation read in part, "where the local dental and medical professions have approved this program and where the community can meet and maintain the standards required by the State Health authority."

Until the present the fluoridation of communal water supplies has been considered to be in the experimental stage.

Dominion Dental Council Changes Name:—At the meeting of the Dominion Dental Council held at Toronto last May decision was made to change the name of the Council to DENTAL COUNCIL OF CANADA. At the first meeting of the Canadian Dental Association held at Montreal in 1902 the foremost item on the agenda was the establishment of a national examination which would be recognized by all provinces. The result of action taken at that time was the formation of the Dominion Dental Council in 1904. The certificate of this Council has been recognized for purposes of registration continuously by seven provinces and at different periods by eight provinces. During recent years the Council on Dental Education of the Canadian Dental Association has endeavoured to devise conditions for a national examination which would be recognized by all provinces.

Miss Mary Brett of Regina becomes the **first Dental Hygienist to be registered in Canada**. Miss Brett is the daughter of Dr. A. J. Brett of Regina, Secretary of the Dental Council of Canada.

By-laws governing the practice of Registered Dental Hygienists were approved by the Saskatchewan Government this spring and the Council of the College of Dental Surgeons of Saskatchewan declared April 1, 1950 as the date for the legislation to go into effect. This action constitutes a landmark in Canadian Dental History.

A list of provincial Dental Health Divisions with name and address of Director follows. It will be noted that 9 out of 10 provinces now have a Division on Dental Health.

B.C. Dr. F. McCombie,
Dir. Div. of Preventive Dentistry,
Dept. of Health and Welfare,
Victoria, B.C.

- Sask.* Dr. A. E. Chegwin,
Dir., Division of Dental Health,
Saskatchewan Dept. of Health,
Regina, Sask.
- Man.* Dr. W. G. Campbell,
Director of Dental Services,
Man. Dept. Of Health & Pub. Wel.,
Winnipeg, Man.
- Ont.* Dr. R. A. Kohli,
Director of Dental Services,
Ontario Department of Health,
Queen's Park,
Toronto, Ont.
- Que.* M le docteur Louis-J Bonneau,
Directeur de l'hygiène dentaire,
Unité sanitaire,
Verchères, P.Q.

- N.B.* Dr. R. S. Langstroth,
Director of Dental Health,
Dept. of Health and Soc. Services,
Fredericton, N.B.
- N.S.* Dr. W. G. Dawson,
Director of Dental Services,
Department of Public Health,
Halifax, N.S.
- P.E.I.* Dr. B. J. O'Meara, (after Aug. 13).
Director of Dental Health,
Dept. of Health and Welfare,
Charlottetown, P.E.I.
- Nfld.* Dr. H. E. McKenna, (temp. appt.)
Director of Dental Health,
Department of Health,
St. John's, Newfoundland.

NEWS FROM THE PROVINCES

ONTARIO

The **University of Toronto Dental Alumni Association** is a Constituent of the University Alumni Association, and embraces all the living graduates in dentistry from that University located over the face of the globe. While most of its members live in Canada, some have located in the United States, England, Australia, New Zealand, India, China, Tanganyika, South Africa, West Indies, Japan, and South American countries. Communications have been received from many of these areas in the last four years.

The purpose of this Association is to promote and maintain interest in the University of Toronto, by developing programs for the graduates and undergraduates. These activities have embraced sponsoring student receptions, preparation of a vocational guidance booklet, participation in Home-Coming Week Ends, Memorial Day Services November 11, maintenance of mailing lists for various class reunions, and the dissemination of general information to the dental profession.

In the short period of four years, our Association has enlisted the active annual support of over 1200 graduates who participate at least to the extent of paying dues of \$3.00. This compares most favourably with other faculties since our membership roll is 35% of 3500 possible graduates. The general annual membership of all other faculties is about 10% of the total graduate body, and our progress has been easily recognized.

As an important Constituent, the Dental Alumni Association has been given representation on the Memorial Scholarship Fund from which we receive two annual scholarships for students with war service records, or whose parents had such records. In addition we were

honoured by having one of the five members of the University graduate body, as a member of the Nominating Committee for Chancellor, indicating the position which we occupy in University matters.

For the coming year it is the hope of the executive to expand our activities to interest every member whether he re-

DR. Wm. W. BRESLIN

President Univ. of Toronto Dental Alumni Assoc.



sides in Ontario or elsewhere. A special Clinic Day is planned at the University, where subjects will be covered as distinct from demonstrations at Conventions. The subjects may include medicine, pathology, bacteriology, therapeutics and anatomy. Special emphasis should be placed on techniques relating to the adaptation of these basic sciences to actual practice of dentistry. For those unable to attend because of distance from Toronto, a résumé will be mailed at the completion of the session.

The following executive has been elected for the year 1950-1951, assuming office July 1.

President, Dr. William W. Breslin, Toronto; Past President, Dr. Wesley J. Langmaid, Oshawa; Hon. President, Dr. A. D. A. Mason, Toronto; 1st Vice-Pres., Dr. J. C. Fullerton, Toronto; 2nd Vice-Pres., Dr. J. A. Marshall, Belleville; 3rd Vice-Pres., Dr. Lee S. Honey, Welland; Treasurer, Dr. Gordon Chalmers, Toronto; Secretary, Dr. A. Roy Kerr, Toronto.

Executive Members: Toronto, Dr. H. R. Bateman, Dr. W. Cavanaugh, Dr. W. J. Armstrong, Dr. R. C. Freeman, Dr. J. E. Tilson; Port Arthur, Dr. Harry Hutchison; London, Dr. Cecil S. Strachan; Ottawa, Dr. E. J. McCartney; Hamilton, Dr. W. W. Baxter; Oshawa, Dr. I. J. Werry; Owen Sound, Dr. W. J. Tackaberry; North Bay, Dr. R. A. Torrance; Windsor, Dr. Louis Fenech.

—A. Roy Kerr,
Secretary

DR. V. S. FOURNIER

President, Northern Ontario Dental Association



Northern Ontario Dental Association.—Dr. V. S. Fournier of this society writes the following message—

The Northern Ontario Dental Association is holding its 10th annual meeting in Sudbury on September 9.

An interesting program of clinics, speakers and entertainment has been arranged for the profit and pleasure of all who attend.

A cordial invitation is extended for a visit to Sudbury on September 9.

The guest speakers on the program include Dr. Robert E. Moyers and Dr. Gordon W. Johnston, both from the Faculty of Dentistry, University of Toronto. Dr. Moyers will present two addresses entitled, "Orthodontic Diagnosis for the Dentist in General Practice", and "Guiding the Primary Dentitions to Adult Efficiency." Dr. Johnston will clinic on amalgam restorations.

Special features of the convention will include the President's banquet and for those who remain over Sunday a tour of the International Nickel Company plant thence to the summer home of Dr. and Mrs. Vince Keenan for an afternoon of fun.

Appointments To Sunnybrook Hospital Dental Staff.—Dr. Douglas Tanner and Dr. W. G. McIntosh have been appointed consultants to the staff of this hospital in the respective departments of Dental Oral Surgery and Periodontics.

The Kinsmen Club of Ottawa have decided to purchase dental equipment to be installed in the Secondary Schools Dental Clinic at a cost of \$1,658. It is to be known as the Kinsmen's Dental Clinic.

Toronto and District Golf.—The fall golf meet of this association will be held on September 15 at the Summit Golf Club.

All golfers in the district are invited to attend.

Dinner at 7 p.m. Tickets \$6.00

—Dr. J. F. Methven
503 Runnymede Rd., Secretary

QUEBEC

The Montreal Endodontia Society.—The executive in summer session has prepared a most interesting program for the coming session. At its first meeting in September, Dr. Gertrude Kalz, Associate Professor of Bacteriology at McGill University will lecture on "The Role of Antibiotics in Dental Medicine." In November, Dr. J. Renaud of the Université de Montréal, will discuss "Pulp Capping." Dr. Cameron Walsh of the McGill Dental School's Department of Pedodontics

will give a practical demonstration on "Pulpotomy" in December. In January, Dr. E. A. Dorion will demonstrate "X-ray Technique." For the February meeting, Dr. Archie Cameron will demonstrate "Rubber Dam Technique"; Dr. Marcel Archambault will show the technique of "Opening into a Molar"; and Dr. G. Zimmerman will demonstrate "The Opening into an Anterior Tooth." For March and April, it is planned to have a practical demonstration of "An Immediate Sterilization," and a "Forum". The May meeting will probably be in the form of a "Dinner Meeting" with an out of town speaker.

L. J. R.

NOVA SCOTIA

The final meeting of the **Halifax Dental Society** was held at the Nova Scotia Hotel on May 4.

The guest speaker was Dr. B. Miller who spoke on "Infections and Affections of the Temporo-Mandibular Articulation," which elicited considerable discussion among the members.

The following slate of officers were elected for the year 1950 and 1951: President, Dr. Wilfred Barnstead, Halifax; Vice-President, Dr. A. Ervin, Dartmouth; Secretary-Treasurer, Dr. G. Pentz, Halifax; Executive Member, Dr. John Vaughan, Halifax.

BRITISH COLUMBIA

The final spring meeting of the **Victoria Dental Society** took the form of a business meeting and election of officers. The following were elected as officers of the Society: President, Dr. H. R. Turner; Pres.-elect, Dr. R. H. McDougal; Sec.-Treas., Dr. J. T. M. Dohan; Directors, Drs. Tom James, Terry Smith and S. Richardson.

Members of the **Inter-City Gold Foil Study Club** will recess for the summer months. Representatives from Victoria, Vancouver and New Westminster form the personnel of this group, which has been active during the past year, as usual. Dr. Norman Ferguson, of New Westminster, is the newly elected president, and Dr. Bob Scharff of Vancouver is secretary.

The **British Columbia Dental Association Executive Committee** met recently to organize committees for the coming year. Dr. Jack Mercer, of Victoria, was in the chair for his first meeting. Committee heads were appointed, and plans reviewed for the coming year's work.

In view of the fact that the Pacific Coast Dental Conference will meet at Seattle next year, it was decided to hold

no annual convention in this Province next spring. Plans are being formulated to send a small group of clinicians or lecturers to several centres in the Interior of the Province during the coming winter, and it is hoped that this move may become a routine part of the work of the Association in the future.

A report issued by the **Department of Health and Welfare** of the Province of British Columbia, issued recently, acknowledges the fine work done by the Dental Public Health committee of the Association, in co-operation with Department officials during the past year, in outlining a long range program of dental public health for the Province.

At the **June and July examinations** of candidates for admission to practice in this Province, an unprecedented number presented themselves. Forty-seven in all took the examinations, of which forty-two passed. Four of those who failed were unable to complete the clinical tests satisfactorily, and one did not pass the written examination.

It is interesting to note that twenty-one of the new candidates were born on the prairies, and twenty-two are native British Columbians.

ALBERTA

The **Annual Meeting of the Board of Directors of the Alberta Dental Association** was held in Lethbridge on June 24-25.

Representatives present were: from Edmonton, Dr. R. A. Rooney, Dr. W. E. Addinell; from Calgary, Dr. A. Steeves, Dr. Baden Powell; from Red Deer, Dr. C. D. Husband; from Medicine Hat, Dr. R. Gibson; from Lethbridge, Dr. A. Ahrens.

Among the many items of business considered was—The supporting of the purchase of a headquarters house for the C.D.A.

A resolution was passed requesting that a committee of the Dental Council of Canada meet with a committee of the C.D.A. soon, and bring in a definite plan for a National Examining Board for Canada.

The Dean and Members of the Faculty of Dentistry of Alberta University were complimented on the results of this year's work and it was suggested some form of scholarship be set up.

A sum of money was voted to aid our dental confrères in and around Winnipeg who were so disastrously affected by the recent flood.

Considerable discussion took place in connection with the limiting of work done by prosthetic dental laboratories.

The following officers were elected: President, Dr. A. Steeves; Vice-President,

Dr. C. D. Husband; Secretary-Treasurer, Dr. R. A. Rooney; Chairman Legislative Committee, Dr. W. E. Addinell; Chairman Public Relations Committee, Dr. L. K. Brooks; Chairman Public Health Committee, Dr. H. R. McLean; Representative C.D.A., Dr. Baden Powell; Representative to Pacific Coast Conference, Dr. R. A. Rooney; Chairman Benevolence Committee, Dr. L. Oatway; Chairman of Liaison Committee, Dr. John Clay.

—W. E. A.

An appreciation of the late Dr. Warren C. Oxner from Alberta.—Dr. Oxner passed away suddenly, on June 7, in his home city of Halifax. He had just returned from the meeting in Toronto of The Dental Council of Canada and the Canadian Dental Association. The information of his death came as a great shock to the host of friends and associates he had met so often and with whom he had laboured so diligently over the long years in the interests of his profession.

It is trite to state, but very true, that Dr. Oxner will be sorely missed; in his home and community where he was known and loved so well; at Dalhousie University where he inspired young men and women with the kindly philosophy that guided his own life; in the Dental Council of Canada where he laboured for more than fifteen years, leaving with each of us who knew him so well an indelible memory of his charm and lovable personality.

Warren Oxner possessed and exemplified during the whole course of his private and professional career the essential characteristics of a very great gentleman.

—H. L. Freeland

The first summer golf game of the **Edmonton and District Dental Society** took place at the Mayfair Golf Links, Edmonton, on June 15, when 41 golfers turned out and after an afternoon of golf, a sumptuous dinner was partaken of by all, at which time the prizes of the afternoon were given out. Low gross and low net scores were both won by Dr. Niki-foruk of Vegreville.

Prizes for spasmodic brilliance in golf were won by Dr. P. G. Atkinson of Calgary, and Dr. George Decker of Edmonton, who both obtained two birdies during the afternoon. Dr. George Brass was able to obtain one birdie during the afternoon and for this effort received a suitable reward. Hidden holes were won by Dr. McCormack, Dr. Jackson and Dr. Cameron.

—W. E. A.

SASKATCHEWAN

The last meeting of the **Saskatoon Dental Society** was exceptionally well attended and it was reported that 25% of the local members were in attendance at the C.D.A. Convention in Toronto.

The members agreed to participate in the Accident and Casualty Insurance Plan for the Saskatchewan Dental Group. Also, the Society enrolled in the Telephone Extension Program from the College of Dentistry, University of Illinois.

A local member, Dr. Frank Bernbaum, gave a very interesting and practical clinic on Hydrocoloids in Fixed Bridge and Inlay prosthesis.

The dental assistants very charmingly and graciously entertained the dentists in the Terrace Lounge of the beautiful Bessborough Hotel.

The Officers for the next year are as follows: President, Dr. S. Gelmon; Vice-President, Dr. F. Bernbaum; Secretary-Treasurer, Dr. A. Fernet.

—L.H.

MANITOBA

Conviction of Dental Mechanics.—With war having broken out in Korea every thinking individual is wondering what the probabilities are for another world conflict with its demands for man power.

The last occasion made it necessary to train hundreds of young men as dental mechanics. These chaps had not yet reached an age to have learned how to be self supporting. Upon discharge they had acquired a skill as mechanical dentists and many of them with the opportunities offered by the department of veterans' affairs for further education took up the study of dentistry. With their knowledge of how to work at the bench and their professional training they should be equipped to make a name for themselves in their chosen profession.

Others with the training as dental mechanics have found very little demand for their services and some have been tempted to engage in illegal denture practice. In this province this menace to public health had grown to an extent that an investigation was begun to curb the menace. The result of the investigation up to the end of June brought about the conviction of eight dental mechanics. Two of them were convicted on second offence charges, making a total of ten convictions in three months.

With malice toward none; with charity for all; with firmness in the right, as God gives us to see the right, let us strive to finish the work we are in.—Abraham Lincoln

DENTAL NURSES AND ASSISTANTS

BRITISH COLUMBIA

At the June 12 meeting of the **Vancouver Dental Assistants' Association**, 37 members were in attendance.

The main speaker of the evening was Miss Tenna Hunter, R.N., Director of the Metropolitan Health Services in Vancouver, who gave a most interesting talk.

The Secretary read a letter of thanks from the Dental Laboratory Association

of B.C., in which was expressed appreciation of the recognition received from the Dental Assistants' Association and assuring continued co-operation.

Miss Jean Hope, Membership Committee, introduced four new members.

Arrangements were completed for the Informal Gingham Swing on June 15. The dance was a real success—everyone had a good time and the finances are in a healthier condition.

—Mildred Armstrong

BRITISH COMMONWEALTH NEWS

NEW ZEALAND

National Health Scheme—New Zealand's Conservative government, in power only a few months, has begun already to overhaul the socialists' medical care program with the avowed purpose of cutting the country's annual health bill which it believes has got out of bounds. In the past seven years, for instance, free prescriptions under the national health scheme have doubled. In 1943,

3,500,000 prescriptions costing \$1,500,000 were issued gratis to the public. During the year ended March, 1950, this had risen to 7,000,000 prescriptions, costing \$5,600,000. Reduction of these costs is the Conservative government's No. 1 priority in its house-cleaning program. . . J. T. Watts, Minister of Health, is determined to stamp out alleged "extravagant practices" and expensive methods of administration.—C. Sc. Monitor per Public H. Econ.

GENERAL NEWS

At the May 11-14 meeting of the **Dominion Dental Council** held in Toronto, several important changes were made in the Constitution and By-laws of this Council as follows:

1. The Council will henceforth be known as "The Dental Council of Canada.

"The Dental Council of Canada is not a licensing body, but anyone who secures the certificate of the Dental Council of Canada by examination is registered on the Registrar of the Dental Council of Canada. This certificate entitles him to apply for registration to practise dentistry in any of the provinces entering into agreement under the regulations of the Dental Council of Canada.

2. "TO WHOM CERTIFICATES OF QUALIFICATION SHALL BE GRANTED:

"The following classes are eligible for certificates of qualification by meeting the standard erected for each as follows:

Class A

"Canadian citizens who are graduates of dental schools of Canada or the United States of America which are approved by the Council on Dental Education of the Canadian Dental Association and who

DR. STEPHEN A. MOORE of London, Ontario, accepting the Certificate of Honorary Membership in the Canadian Dental Association from the President, Dr. G. Vernon Fisk.



have complied with the following requirements:

"(a) The presentation to the Secretary of the Dental Council of Canada of an enabling certificate which he obtains from the Registrar of the legal dental body of the province in which he resides. "This certificate states that the candidate has complied with all the requirements relating to preliminary education (consisting of at least two years in arts and science, which includes physics, chemistry, biology, French or English), matriculation, dental curriculum and graduation, and his eligibility to write on the examinations for license to practise dentistry in that province.

"(b) A Class 'A' candidate who does not complete his examination in five years shall automatically become a Class 'D' candidate.

Class D

"Any holder of any valid and unforfeited certificate which has been registered in any of the agreeing provinces and who produces proof of having had pre-dental education equal to two years in arts and sciences, which includes physics, chemistry, biology, French or English, in any recognized University of an agreeing province and who has been in regular, legal and ethical practice of dentistry in any of the agreeing Provinces of Canada for at least five years immediately prior to the date of application for examination, may make application to take the Dental Council of Canada examination; provided his legal, ethical and moral standard is vouched for by other members of the profession, and that he pay the fee of \$150.00.

"Candidates for examination under Class 'D' will be required to pass the same examination as Class 'A'.

"Candidates applying for Class 'D' examinations shall provide an enabling certificate provided by the Registrar of the legal dental body of the province in which he practises."

3. Clinical examinations in operative and prosthetic dentistry are eliminated after July 1, 1950, the college clinical examination results of the candidate to be accepted.

4. Possessors of valid and unforfeited certificates of license in Newfoundland who have been in regular, ethical practice and who are vouched for by the legal body in Newfoundland will be granted Dental Council certificates upon the payment of the fee of \$150.00.

Officers elected for two-year periods are as follows:

President—Dr. Henry L. Freeland, Calgary, Alta. (re-elected).

First Vice-Pres.—Dr. Heath McIntyre, P.E.I.

Second Vice-Pres.—Dr. R. O. Winn, Kitchener, Ont.

Secretary—Dr. A. J. Brett, Regina, Sask. (re-elected).

New Brunswick—Dr. Harry M. Peters, St. John.

Nova Scotia—Office vacant due to death of Dr. W. C. Oxner.

Manitoba—Dr. A. E. Proctor, Winnipeg.

A grant of \$500.00 was made to the Manitoba Flood Relief Fund.

The next meeting will be held in Vancouver in 1952.

—H. L. Freeland, Calgary

Dominion Dental Council Examinations—The following are the names of the successful candidates in the 1950 Dominion Dental Council examinations:

Akaye, Hiroshi; Amonson, Leslie Earl; Baker, Howard Stewart; Banks, Edwin MacNeil; Bookhalter, Paul; Braaten, Chester Roland; Bradley, Teddy Phillips; Brake, John Jury; Campbell, Wm. Frederick; Cook, Walter Frank; Copeland, Gerald Palmer; Costigan, Roy Louis; Cowburn, Herbert Houston; Deedrick, Dalton Charles; Epstein, Louis; Ferguson, James Allan; Geis, Kenneth Earl; Gelmon, Abraham; Gertler, Coleman; Glenn, Robert David; Gray, Robert Archie; Hague, Louis Anthony; Harms, John R.; Harwood, William Randolph; Hewitt, William Harold; Holt, Patrick Ferguson; Hunter, William Stuart; Kerr, Kenneth MacFarlane; Kettys, Hugh Ross; Kuzyk, Victor C.; Lamping, Joseph Donihee; Lindskoog, Gustave Theodore; Macaulay, Douglas Walter; Mass, Bernard Phillip; Miller, Kenneth Gordon; Mullen, William John; Mulligan, William Orr; McClelland, Richard Charles; MacDiarmid, John Edward; McDonald, Donald B.; MacDonald, Ian Allan Cameron; McDonald, Joseph Christopher; McIver, George Dickson; MacKenzie, Bruce M.; Norquay, John Scott; Pearce, George Arthur; Perdicaris, James; Polos, Walter Eugene; Proctor, Donald B.; Rasmussen, Roy Leon; Richardson, Leon Arkle; Robinson, George McClelland; Routley, Keith Newton; Schumacher, Edwin Leo; Simpson, William John; Smith, John Malcolm; Snidal, Marino James; Spracklin, Thomas Edward; Stack, Mary Kathleen; Steen, William Irwin Maurice; Swann, Gordon Cummings; Swiston, Walter; Thompson, Donald Lloyd; Trudelle, Alfred Anthony; Turner, Alfred Thomas; Van Alstine, Robert Stacey; Villeneuve, Joseph Wm. Bernard; Wihak, Theodore Frederick; Wolch, Marvin E.; Wood, Frederick Thomas; Woolsey, Albert Harlan; Young, John Edward Mingay; Zacharias, Irwin Isaak.

The First Annual Berkshire Conference in Periodontology and Oral Pathology was held at Eastover, a resort hotel in Lenox, Massachusetts from June 13 to 17, 1950. Under the direction of Dr. Irving Glickman and staff of Tufts College Dental School Postgraduate Division, 82 dentists from ten of the United States, and 3 dentists from Montreal, attended a well planned conference consisting of four days of lectures, seminars, and panel discussions regarding clinical problems by prominent teachers and clinicians in dentistry, medicine and their related fields. The curriculum was arranged so that the mornings and evenings were devoted to professional activities, with the afternoons being left open for recreation.

Each speaker was allotted approximately 45 minutes following which an open discussion was held when those attending could air their views or present their problems. The program was as follows:

"Diagnosis and Treatment of Dermatological Lesions of the Oral Cavity," by Francis P. McCarthy, M.D., Professor of Oral Medicine, Tufts College Dental School.

"The Evaluation of the 'Bone Factor' in Clinical Periodontology," by Irving Glickman, B.S., D.M.D., Professor of Oral Pathology and Periodontology, Tufts College Dental School.

"Panel Discussion: The Different Methods of Treatment of the Periodontal Pocket," by Charles H. M. Williams, D.D.S., B.Sc., Asst. Prof. of Periodontology, University of Toronto, Faculty of Dentistry; and by Dr. Glickman.

"The Diagnostic Approach to Oral Neoplasms," by Lt.-Col. Joseph L. Bernier, D.D.S., M.S., Chief of the Dental and Oral Pathology Section of the Army Institute of Pathology; Pathologist to the Registry of Dental and Oral Pathology, U.S. Army Medical Museum.

"The Internist and the Periodontal Problem," by Mark Aisner, M.D., Ph.D., Research Prof. of Medicine, Tufts College Medical School; Endocrinologist, New England Medical Centre.

"Psychomatics in Dentistry," by Milton Greenblatt, A.B., M.D., Senior Physician, Boston Psychopathic Hospital; Director of Laboratory and Research of the Boston Psychopathic Hospital.

"Panel Discussion: Auxiliary Procedures in Periodontal Therapy," by Irving R. Hardy, D.M.D., Prof. of Prosthetic Dentistry, Tufts College Dental School; Herbert R. Margolis D.M.D., Prof. of Grad. Orthodontics, Tufts College Dental School; and Herbert H. Kabbnick, D.D.S., formerly the Assoc. Prof. in charge of Crown and Bridge Dept., New York University College of Dentistry.

"Nutrition and the Oral Cavity," by

David Weisberger, M.D., D.M.D., Assoc. Prof. of Dental Medicine, Harvard School of Dental Medicine; Chief of the Dental Dept., Mass. General Hospital.

"Nutrition and Diet," by Robert S. Harris, Ph. D., Prof. of Biochemistry of Nutrition and Director of Nutritional Biochemistry Laboratory, Mass. Institute of Technology.

"The Temporomandibular Joint," by Harry H. Shapiro, D.M.D., Assistant Prof. of Anatomy, College of Physicians and Surgeons, Columbia University.

"Panel Discussion: Occlusion—Its Implications in The Periodontal Problem," by Clyde Schuyler, D.D.S., F.A.C.D., Diplomate American Board of Prosthodontics; and Lewis Foxm D.D.S., Member American Academy of Periodontology.

"The Newer Antibiotics and Oral Disease," by Maxwell Finland, B.S., M.D., Asst. Prof. of Medicine, Harvard Medical School; Chief Fourth Medical Service, Boston City Hospital; Asst. Physician, Thorndike Memorial Laboratory.

"Endocrinology and the Oral Cavity," by Edwin B. Astwood, M.D. Ph. D., Research Prof. of Medicine, Tufts College Medical School; Endocrinologist, New England Medical Centre.

"Panel Discussion: The Pitfalls in Periodontology," by Jerome Schweitzer, B.A., D.D.S., Lecturer, Columbia University Dental School; and Dr. Glickman.

—R. F. Harvey

Dental Health Program for Indians—

A dental health program among the Indians of the Northwest Territories is being planned with Dr. E. T. Hunt in charge. This will provide the beginning of dental services for the small settlements scattered over the more than 1,250,000 square miles of the Territories.

Dr. Hunt will travel from village to village, spending about a month in each place. Dental care for the Indian and white children in the settlements he visits will have top priority. Adults, Indians and whites, will have second call on his time. At first it is expected that most of the work will be treatment of acute conditions, but later a program for the prevention of dental ailments may be undertaken. The first clinic was to be set up at Fort Smith about July 1.—Dept. of N. Health and Welfare.

National Health Service—The British may have set themselves too high an objective but we must be careful not to set ours too low. We, too, must provide essential medical care for the poor, reduce the excessive medical costs on the middle class, and ensure the financial stability of our hospital system. But we must do more. We must constantly strive for a higher quality of medical care and

for improvements in preventive services. And we must seek to accomplish these purposes through an efficient and economical use of our resources. These are difficult objectives, and the solutions will not come easily, but they must be found. And they cannot be accomplished by a single piece of legislation, not even by a host of legislative measures. But we must move ahead, Americans, like their British cousins, want the benefits of medical science, but not at the cost of medical progress.—Modern Hospital May 1950, per Public H. Econ.

Aureomycin Side-Effects—The British Medical Journal of May 20 reports side-effects from the use of this drug in the nature of nausea, epigastric distress, heartburn and diarrhoea. Mucous membrane changes were also reported in the nature of fine red, vesico-papular eruptions, first appearing on the uvula and spreading to the hard palate, pharynx, cheeks, lips, corners of the mouth and tongue. After initial glossitis the tongue became heavily coated and two patients developed a black "hairy" tongue.

National Health Insurance In U.S.A.—Enactment of President Truman's program of compulsory national health insurance would lead to socialized medicine and would be a "tragic blunder" for this country. This is the finding of the committee on public health and welfare of the New York State Chamber of Commerce following a seven-month study of the subject. It calls on Congress to reject the President's plan. "Under the proposal now before Congress, direction and control of the nation's physicians, dentists, and other health and medical personnel and facilities would be vested in a bureau of the federal government," the committee states. "This could result only in a bureaucratic regimentation of

physicians and doctors, hospitals and other medical and health facilities. To a large extent the freedom of the patient—and the doctor—would be destroyed. Individual incentives to which we owe so much of our progress would be dampened. Inevitably there would be a marked deterioration in the quality of medical care." The committee warns that this pattern might also be applied to other groups in the economy.

The committee proposed that government, business and industry, labour, agriculture, and all citizens join in promoting voluntary programs to extend medical and hospital care.—C. Sc. Monitor, June 1, 1950 per Pub. Health Econ.

Gottlieb's Theory Contradicted By N.Y. Study.—A year-long study, conducted by David B. Ast, in association with Arthur Bushel, assistant New York State dental director, was made of 179 boys and girls between the ages of 12 and 15 in two high schools in Schenectady and Albany which has resulted in the first authoritative refutation of the Gottlieb theory.

For a control, half the mouth was untreated, and the other half (upper and lower teeth) was treated as prescribed by Gottlieb, after the entire mouth had been cleaned and roentgenographed. Dr. Ast report that on the untreated side, 28 per cent of the upper caries-free teeth became carious after one year, and on the treated side, 24.8 per cent became carious. For the lower teeth, 17.3 per cent of the untreated side showed caries, and 17.5 per cent of the treated side became carious.

For all surfaces, the total for upper and lower showed that 7.8 of the untreated side became carious and 7.4 of the treated side had developed caries.—

—J. A. D. A.

IN MEMORIAM

William Russell Marshall of Toronto, Ontario, died June 22 following a lengthy illness. He was graduated from the School of Dentistry of the Royal College of Dental Surgeons of Ontario and practised in Toronto for 35 years.

For 17 years he was organist at Trinity United Church.

Dr. Marshall is survived by his widow.

John Kerr Higgins of Saint John, N.B. aged 56, died suddenly of a heart attack at his home on June 11. He was born in Mossoula, Montana, but spent the great-

er part of his boyhood in Saint John. He was graduated from the Provincial Normal School and taught school in various parts of New Brunswick and Saskatchewan. Dr. Higgins was graduated in 1924 from the School of Dentistry of McGill University. He was a past president of the N.B. Dental Society and at one time was the registrar of that Society. He was a good public speaker and in sports a keen fisherman.

Dr. Higgins is survived by his widow and one son.

—J. F. E.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

AOUT, 1950

NO 8

La carie dentaire: étiologie, mécanisme, prévention*

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et de Chirurgie Dentaire, Université de Montréal.

La profession dentaire, depuis les deux dernières décades, a tellement mis l'accent sur la prévention des maladies buccales et principalement de la carie dentaire, que la plupart des travaux de recherches s'orientent bien plus dans le sens de la prévention que dans celui de la réparation. Malgré les raffinements techniques qu'on a développés à outrance de 1875 à 1925, on a vite fait de se rendre compte qu'il valait mieux dépenser tous les efforts à maintenir en place des dents saines, plutôt qu'à tenter de réparer et de remplacer ce qu'une hygiène rationnelle, mise en action sous la surveillance constante du dentiste, peut conserver en excellente santé. Si nous avons à notre disposition des méthodes qui nous permettraient de prévenir la carie chez la plupart de nos congénères, il ne faudrait pas pour cela croire à la nécessité de bannir de nos connaissances la dentisterie opératoire, la prothèse, ou l'orthodontie, pas plus que les prérogatives du dentiste se confondraient avec celles de l'hygiéniste ou du pathologiste hautement spécialisé. Les maladies buccales courantes, dentaires ou paradentaires, ont une telle incidence qu'à peine le quart ou le cinquième de notre population reçoit une

attention plus ou moins continue de la part du dentiste. Il est donc grandement temps d'accorder le meilleur de notre énergie à la prévention des maladies buccales, et d'imiter Henrik Dam, ce grand savant danois, qui a découvert le vitamine K et arrêté l'attention du monde médical sur son rôle dans la coagulation du sang. Dam, depuis ces dernières années, consacre son temps et son expérience à l'étude de la carie expérimentale. Cet exemple ne doit pas nous faire oublier l'immense travail qui se poursuit partout dans le monde, par les hommes de science de toutes les disciplines, physique, chimie, bactériologie, physiologie, histologie, pathologie. Ils témoignent le même enthousiasme à arracher à la nature les secrets dont elle entoure la carie dentaire et dont, pourtant, elle affecte les hommes depuis si longtemps.

En dépit du fait que ces chercheurs utilisent dans leurs laboratoires des techniques compliquées et assez rébarbatives aux profanes, dans leur tentative de trouver ces armes préventives contre la carie, ils en viennent à nous offrir des méthodes relativement simples dans leur application autant que dans leurs principes. Ces méthodes ne sont pas toutes

*Conférence prononcée le 2 juin 1950, lors du Congrès de la Société Dentaire de Montréal.

d'égale valeur, et le praticien qui les soumet à l'épreuve cruciale en est le juge incontesté. Nous nous proposons de discuter ces méthodes susceptibles d'enrayer la carie et de recommander celles qui s'avèreront les plus sûres et les plus efficaces. Mais avant d'entreprendre cette discussion, nous croyons indispensable de revoir les notions générales concernant l'étiologie de la carie, d'en rappeler les mécanismes théoriques et de comprendre le principe des tests qui nous permettent d'en apprécier la gravité.

1) ETIOLOGIE DE LA CARIE

Actuellement, nous sommes dans l'impossibilité de répondre d'une façon simple et précise aux patients qui innocemment nous demandent: "La carie, à quoi donc est-ce dû?" Les causes véritables qui amorcent cette série de phénomènes destructeurs, nous les ignorons, mais nous sommes légitimés de prétendre qu'un certain nombre de facteurs peut entrer en jeu à des intervalles encore imparfaitement déterminés. Ces facteurs nous pouvons les réunir en deux groupes: les facteurs endogènes et les facteurs exogènes.

A) FACTEURS ENDOGENES:

Parmi les facteurs endogènes, c'est-à-dire ceux qui dérivent de la santé de l'individu, de sa croissance normale, et de l'intégrité de ses fonctions physiologiques, nous pouvons énumérer:

1. La structure intime de la dent et son anatomie,
2. La salive,
3. Les déséquilibres nerveux et endocriniens,
4. L'hérédité.

1a.—Structure intime de la dent et son anatomie.

Dans la structure intime de la dent nous avons à considérer la portion inorganique et la portion organique. Selon que l'on s'adresse à l'émail ou à la dentine, l'importance des proportions de chacune varie.

On sait que l'émail contient des prismes très riches en phosphate tricalcique. Ces prismes seraient formés d'un empilement longitudinal de microcristallites d'hydro-

xyl-apatite. (27). Les prismes sont emprisonnés dans un réseau de substance interprismatique. Il existe dans la substance interprismatique de la matière organique dont la nature protidique s'identifie aux kératines, comme celle des ongles ou des sabots des équidés.

La structure de la dentine est de moindre intérêt dans le sujet que nous traitons. C'est en effet l'émail qui offre la première barrière à la carie et si au cours de sa formation des troubles apparaissent, ce moyen de défense contre la carie devient infirmé. Nous aurons l'occasion plus loin de rappeler les éléments nutritifs en relation avec la formation de l'émail, et d'insister sur le rôle de sa matrice organique dans la carie.

1b. Anatomie.

Que l'anatomie de la dent soit un facteur prédisposant à la carie, nous en convenons facilement. D'autant plus que Gottlieb (24) et Pincus (44) s'entendent indépendamment à démontrer que le fond des fissures est ordinairement plus riche en matière protéique, ce qui faciliterait l'action des agents protéolytiques. La malposition des dents jouera aussi un rôle en multipliant les sinuosités favorables à l'adhésion des débris alimentaires et en rendant plus difficile l'hygiène buccale.

2. Salive.

Le facteur endogène à la fois le moins connu, le plus mystérieux, et peut-être aussi le plus prometteur (en ce qu'une plus ample connaissance de sa composition et de ses fonctions nous réservent de surprises) est sans contredit la salive.

La littérature scientifique rapporte plusieurs travaux où l'on a tenté de mettre en évidence une ou plusieurs des propriétés de la salive en rapport avec la carie dentaire (33). Les essais de corrélation ont été en général assez infructueux (54) même si l'on accorde à la salive:

1.—Le rôle de nettoyer les débris alimentaires susceptibles d'adhérer aux dents en raison du débit salivaire;

2.—Le rôle de neutraliser les acides formés dans la bouche par le calcium qui est un constituant constant de la salive;

3.—Le rôle de reminéraliser l'émail par absorption du phosphate tricalcique qui, au pH normal de la salive, a tendance à précipiter;

4.—Le rôle d'inhiber la croissance bactérienne par la présence du lysozyme salivaire;

5.—Le rôle d'inactiver encore certains microorganismes par la présence d'anticorps spécifiques; (1) même si l'on accorde à la salive tous ces pouvoirs, ils semblent jouer un rôle encore problématique dans la lutte contre la carie.

Bien plus, la salive pourrait, par certains de ces composants normaux, stimuler certaines phases des processus dégénératifs. En effet la salive contient des vitamines, des protéines qui peuvent servir au métabolisme de bactéries. Par son pouvoir hydrolysant sur les sucres, la salive dégrade les amidons en glucose. Ce dernier est le substrat spécifique pour la formation d'acides. La mucine salivaire peut, en se décomposant, libérer les glucides qu'elle contient, car nous avons affaire ici à une mucoprotéine. Le glucose est donc présent dans toutes les salives (60). Ces fonctions sont parfaitement normales, et elles se retrouvent tant chez les sujets atteints de carie que chez les sujets résistants. D'où la difficulté de conclure à l'influence particulière de la salive comme facteur étiologique de la carie.

Cependant, si la composition salivaire ne nous apporte pas de renseignements concluants, le débit salivaire pourtant mérite une attention spéciale depuis que Trimble et ses collaborateurs (51) ont démontré, chez les individus dont le débit salivaire est très faible, que la carie généralisée ("rampant caries") se retrouve fréquemment, alors que chez ceux dont le débit est grand ou moyen, cette affection ne se retrouve pratiquement pas. Il semble donc exister ici une relation entre la carie et le système nerveux puisque la sécrétion salivaire est sous la dépendance du S.N. et que dans les cas de tensions nerveuses d'origine sympathique le débit salivaire diminue considérablement.

3. Déséquilibres nerveux et endocriniens.

Malgré cela, il serait osé d'accorder à

présent aux déséquilibres nerveux une place prépondérante comme facteurs déterminants de la carie (17). Tout est à faire ou à refaire. Les cliniciens, ici, pourraient rendre de grands services. Il leur appartient de poser des diagnostics précis, de faire des examens minutieux et de recueillir du matériel utilisable à des fins statistiques. Il en est de même des déséquilibres endocriniens; aucune différence significative n'a encore été obtenue au sujet de l'incidence et du taux de la carie dentaire entre les sujets atteints de ces troubles et les normaux.

4. Héritéité.

Encore ici la relation entre l'hérédité et la carie dentaire est défectueuse (1). Bien que l'hérédité puisse apporter une moindre résistance chez les individus d'une même famille, comparativement à une autre, le parallèle ne tient plus entre les diverses races humaines, puisque la carie se retrouve chez les sujets dont la couleur de la peau, la taille et l'habitat diffèrent radicalement. Boyle (8) rapporte que la carie se manifeste chez les primitifs modernes dans la même forme et dans la même proportion que chez les anciens dont on a retrouvé les crânes. De plus, les contemporains, qui quittent la civilisation moderne pour retourner au régime des primitifs, accusent une régression marquée de la carie dentaire. Le caractère héréditaire familial est-il seulement apparent? La susceptibilité à la carie dépend-elle plutôt d'un autre facteur d'ordre social? La question est posée.

B) FACTEURS EXOGENES:

Alors qu'on juge les facteurs endogènes incapables, individuellement autant que dans leur ensemble, d'assumer l'entière responsabilité de provoquer la carie dentaire, quels renseignements l'étude des facteurs exogènes va-t-elle nous apporter?

Les facteurs exogènes les mieux définis sont: la flore buccale, la diète et le facteur de civilisation.

1. Flore buccale:

La microbiologie a contribué largement à l'étude du problème de la carie dentaire. En jetant un coup d'oeil rapide sur les

périodiques dentaires, nous sommes assurés d'y trouver à chaque parution des articles portant sur l'aspect bactériologique de la question. Nous devons en effet, la majeure partie de nos connaissances sur la carie au fait que la flore buccale, en raison de sa variété, est demeurée la vedette principale de toutes nos recherches. Dès 1915, Kliger (36) a déterminé que, par exemple, un milligramme de dépôt qui se forme sur les dents saines renferme environ 25 millions de microbes, que dans le cas d'une dent légèrement cariée, la même source en contient 500 millions et qu'au moins cinq à six cents espèces microbiennes cohabitent dans la bouche. En 1924, McIntosh et Lazarus-Barlow (42) identifièrent le *Lactobacillus Acidophilus* comme un agent capable d'élaborer de grandes quantités d'acides et de se reproduire à un pH assez bas. Bunting (9) et son équipe ont consacré une vingtaine d'années à l'étude du L.A. en fonction de la carie. En 1936, ils énonçaient les conclusions suivantes:

1.—Dans 90% des cas, le lactobacille se retrouve dans les bouches où la carie se manifeste;

2.—A quelques exceptions près, les sujets résistants à la carie ne présentent pas de lactobacilles à l'examen bactériologique de la salive;

3.—Quand on ensemence les bouches de sujets résistants avec du lactobacille, le plus souvent le microbe ne s'y développe pas;

4.—Une augmentation persistante du lactobacille dans la bouche est un indice de l'apparition prochaine de la carie;

5.—L'emploi des sucres dans la diète est un facteur qui stimule le développement du lactobacille, tandis que la suppression de ces aliments s'accompagne d'une diminution du nombre de lactobacilles dans la salive.

Il semble bien en définitive, qu'on soit arrivé au point crucial du problème. Pas encore. D'autres auteurs démontrent aussi que d'autres espèces bactériennes peuvent produire des acides en quantité suffisante pour dissoudre l'émail des dents. Bibby (6) vers 1940, faisant le relevé des variations microbiennes en

fonction de la localisation ou de l'évolution de la carie, trouve que lactobacille n'est pas le seul agent responsable de la carie. En effet, certaines espèces de streptocoques peuvent produire autant d'acide. Stephan (49) corrobore les résultats de Bibby en 1947 et rapporte que, parmi les hôtes de la bouche, les diplocoques, les staphylocoques, les levures et les actinomyces peuvent y abaisser le pH à 5.0 et dissoudre les sels de l'émail.

On doit donc retenir que la production d'acide n'est l'apanage d'aucune bactérie en particulier, et dans le cas où le phénomène initial de la carie serait une dissolution des éléments minéraux de l'émail, on ne saurait indiquer clairement quel agent en est l'instigateur (4). Il faudra donc donner raison à Miller (43) qui, dès 1880, prétendait que spécifiquement aucun microorganisme ne provoque la carie. Si l'on objecte qu'aucune bactérie ne saurait fournir une incidence aussi régulière et une abondance aussi grande avec la présence de carie que L.A., on sera légitimé de répondre que la prolifération de ce bacille est possiblement une conséquence de la carie plutôt que sa cause.

Rien ne nous empêche d'affirmer qu'une fois la carie amorcée, les conditions deviennent alors particulièrement favorables à son développement. D'ailleurs on a jusqu'ici été incapable de déterminer l'instant précis où débute la carie, de sorte que toute corrélation établie entre la présence de L.A. et l'éclosion de la carie ne constitue pas en soi un critère différentiel entre la cause et l'effet.

Les propriétés physiologiques des bactéries ne se bornent pas seulement à la production d'acides à partir des sucres fermentescibles, mais aussi, du moins pour certaines espèces, à dédoubler les substances protéiques en des composés plus simples. Il est connu depuis longtemps que le métabolisme de ces espèces entraînent l'apparition de produits azotés, comme l'ammoniac et certaines amines plus ou moins complexes. L'analyse chimique révèle que l'émail dentaire contient une quantité assez faible de matériel protéique (1.7%) localisée exclusivement dans la substance interprismatique

THEORIE DE LA DECALCIFICATION (Miller)

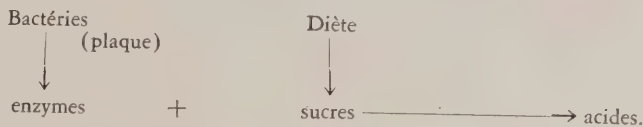


Schéma I

Que cette matière protéique puisse devenir le substrat des enzymes protéolytiques, en théorie rien ne s'y oppose. Nous verrons dans un instant que, sur le terrain expérimental, la question a soulevé beaucoup d'intérêt et qu'elle fait l'objet de nombreux travaux en cours.

Depuis ces dernières années, l'étude des associations microbiennes de la bouche a pris beaucoup d'importance et l'on s'attend à recueillir des renseignements précieux de ces recherches. Fosdick (19) a remarqué que la formation d'acide était plus rapide quand le *L. Acidophilus* était mis en présence d'une levure. La production totale d'acide des deux espèces séparées est inférieure à la quantité retrouvée au cours du processus symbiotique. Même si ces travaux semblent être d'ordre théorique, on ne perd pas de vue que la détermination des conditions optimum du développement de la carie rendra sa prévention tellement plus facile.

2.—Diète.

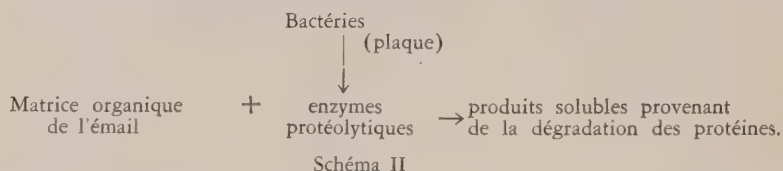
Il est un autre facteur exogène auquel nous avons attaché beaucoup d'importance jusqu'à ces derniers temps, l'alimentation. On a cru que l'ère des vitamines serait aussi propice à débarrasser les hommes de la carie que du bérubéri ou de la pellagre. Dans le domaine que nous explorons, aucune série de recherches n'a été aussi décevante que celle qui a porté sur l'influence des sels de phosphore et de calcium et des vitamines A, D, et C, comme agent protecteur contre la carie. Du fait que la vitamine A s'est montrée indispensable au bon fonctionnement des améloblastes, que la carence en vitamine D entraîne l'hypoplasie de l'émail et une minéralisation imparfaite de la dentine et que la vitamine C (30b) a quelque effet sur la croissance de la dentine, on a cru

que l'utilisation de ces composés dans la diète corrigerait toute défectuosité de l'émail ou de la dentine, chez l'enfant comme chez l'adulte. On a tôt fait de désavouer ces espoirs prématurés. Bien plus, un surdosage de vitamine D et de sels de calcium, au lieu d'augmenter la minéralisation de la dentine, entraîne une hypercalcémie dangereuse, qui favorise la formation de calculs aux reins, au foie et aux pulpes des dents.

Retenons que ces éléments nutritifs sont indispensables à la formation d'une denture normale et que, dans le cas de carences, les tissus dentaires présentent de lésions qui rendent la dent plus vulnérable aux attaques de la carie. Mais, ces facteurs diététiques, une fois les besoins satisfaits, ne constituent pas un moyen de défense. On l'a bien prouvé depuis cette observation chez des individus qui affichaient une hypoplasie de l'émail. Le taux de carie chez ceux-là n'accuse pas une fréquence plus grande que chez les normaux. Toutefois, quand la carie s'attaque aux dents hypoplasées, elle évolue plus rapidement (38). Ceci nous indique bien que les vitamines et les sels minéraux, lorsque la dentition est définitive, n'interviennent plus comme agents protecteurs directs.

Bien au contraire, la diète semble nous apporter des agents favorables au développement de la carie. En effet, elle pourra accélérer le processus de la carie, si son contenu en sucres fermentescibles s'enrichit. Depuis que Miller a noté que ces sucres (glucose, saccharose, maltose surtout; lactose et amidons moins) servaient de source aux acides élaborés par les bactéries, on a souvent vérifié que chez les sujets susceptibles à la carie, la diminution des sucres dans la diète favorisait

THEORIE DE LA PROTEOLYSE (Gottlieb)



une décroissance dans le taux de carie. Boyd et Drain (7) ont rapporté que des enfants diabétiques, non traités, souffraient beaucoup de carie. Mais, soumis pendant six mois à un régime exempt de sucres raffinés, les mêmes sujets accusaient tous un arrêt complet de la carie.

Il ressort donc de ces considérations que la diète, une fois la dent en place dans l'arcade dentaire, ne pourra lui être d'aucun secours, et que plutôt elle sera un véhicule nocif, quand son apport sera trop généreux en glucides.

3.—*Civilisation.*

On répète souvent que la carie est une maladie dite de civilisation. Que l'assertion soit vraie ou fausse, il n'en reste pas moins certain que la carie dentaire est très rare chez les peuplades demeurées à l'abri des artifices et des exigences de la vie moderne, et qui nous donnent le spectacle d'une existence rudimentaire et saine. Lors de son passage à Montréal, le Docteur Waugh nous a fait part de ses observations sur l'absence de carie chez les Esquimaux du Labrador et de l'Alaska. Les mêmes faits avaient déjà été rapportés par Price sur les aborigènes australiens et néo-zélandais. Tous s'entendent sur ce point. Aussi longtemps que ces peuplades demeurent à l'écart des colonisateurs, ils ne souffrent pas de carie. Mais on observe le contraire, quand ils s'adonnent à notre régime alimentaire. Au cours de mon voyage chez les Indiens de la région de Mistassini, j'ai été à même de constater que les sujets de plus de vingt ans présentaient, pour la plupart, des bouches sans carie. Chez les sujets de moins de vingt ans et surtout chez ceux d'âge scolaire, la présence de carie était très accusée. Cette différence marquée en-

tre ces deux groupes d'âge s'explique assez bien. Les conditions de vie des Indiens, du Canada, et spécialement ceux qui demeurent dans les réserves lointaines, se sont modifiées au point de transformer sensiblement leur mode d'alimentation. Les avantages que nos gouvernements leur ont fournis leur permettent de se nourrir fort convenablement. Mais il y a une contrepartie à ces avantages. Ils peuvent maintenant au poste de ravitaillement faire provision de sucreries. Leurs enfants, comme tous les enfants d'ailleurs, en profitent plus qu'à leur tour et se prédisposent ainsi à la carie. Il est probable qu'une enquête bien menée ferait coïncider cette invasion de la carie avec l'amélioration des conditions alimentaires des Indiens.

Que ce facteur de civilisation se confonde avec la présence de sucres raffinés dans la diète, on serait bien tenté de le soutenir. Il semble toutefois que cet aspect est plus complexe, du fait que, chez les peuples civilisés, on observe souvent bien des cas de résistance à la carie chez des consommateurs de sucres raffinés. Ici comme pour les autres facteurs, on trouve toujours des faits contradictoires. Cependant, après cette étude des facteurs étiologiques, on ne peut plus ignorer l'importance des bactéries en relation avec la carie, pas plus qu'on peut négliger un facteur comme la salive, qui est en quelque sorte le milieu de culture de la flore buccale. À l'aide des quelques faits que nous venons d'apporter, il est possible de critiquer les diverses théories de la carie dentaire et d'en poser les limites.

II) MECANISME DE LA CARIE DENTAIRE

1.—*Théorie de la décalcification.*

Miller (43) élaborait ainsi la théorie

TABEAU I
Mesure de l'Activité de la Carie Par Tests
Bactériologiques et Biochimiques

Auteurs	Activité de la carie	0 (nulle)	+	++	+++	++++
			(douteuse)	(légère)	(franche)	(avan- cée)
Hadley (26)	No de L.A. par cc. de salive	0-1000	1000-5000	5000-10000	10000-50000	>50000
Snyder (47)	Coloration d'après le temps	24 V. 48 V. 72 V.	V. V. J.	V. J. J.	J. J. J.	
Wach (53)	PH	7.0-6.0	5.9-5.5	5.4-5.0	4.9-4.5	4.4-3.9
	cc. Na OH O.O 1N	0-0.50	0.51-0.75	0.76-1.00	1.0-1.4	>1.4
Foslick (20)	Augmentation en mgm. Ca par cc. de salive	0-5	5-10	10-20	20-30	>30
Dreizen (14)	cc. d'acide lactique 0.1N	0.615	↔	0.484	↔	0.353

de la décalcification. Parmi les hôtes de la bouche, on trouve des bactéries acidogènes et acidophiles; ces bactéries peuvent à partir des sucres alimentaires produire des acides. Les sucres peuvent séjourner dans les espaces interdentaires où le flot salivaire ne s'introduit que parcimonieusement, surtout lorsqu'ils sont imprégnés dans des aliments adhésifs comme les pâtes. Les acides provenant de ces fermentations microbiennes sont assez forts pour dissoudre la surface de l'émail. La structure de l'émail perd de sa fermeté, se désagrége, offrant une porte d'entrée aux bactéries de toutes sortes. La substance interprismatique est dissoute, les bâtonnets se disloquent et se liquéfient. Le processus ainsi amorcé, l'invasissement se fait jusqu'à la limite émail-dentine avec diffusion subséquente dans les canalicules dentinaires.

Un si grand nombre de faits expérimentaux est venu appuyer cette heureuse conception que même, soixante-dix ans plus tard, la théorie conserve une vitalité incontestable et rallie l'adhésion de la plupart des chercheurs. On vient de le dire, la phase initiale de la carie serait une phase de décalcification. Les travaux qui ont porté sur l'étude de la plaque dentaire confirment ces vues. La plaque dentaire est un amas de microorganismes sphériques, bacillaires et filamenteux, et de cellules desquamantes, le tout imbibé de salive et tenant bien à la paroi de l'émail des dents, soit au collet, soit dans les espaces interdentaires. Au moins 27 espèces bactériennes ont été identifiées dans la plaque dentaire. On y trouve des leptothrix, des actinomycètes qui ont la forme de très longs bâtonnets avec des ramifications, des streptocoques alpha,

des bacilles fusiformes, des diplocoques, etc. On a remarqué que l'indidence des lactobacilles dans la plaque augmente à mesure que la carie progresse, tandis que le nombre des autres espèces ne varient pas ou diminuent. Le schéma I, rend compte de l'allure générale des phénomènes. Les acides produits par les bactéries acidogènes ne diffusent pas hors de la plaque, de sorte que le pH peut rapidement atteindre 5.0, alors que dans la salive le pH se maintient aux environs de 6.5-7.0. Les principaux acides retrouvés dans la plaque sont l'acide lactique, l'acide acétique, et l'acide propionique. Les acides, situés au pourtour de la membrane, neutralisent le calcium à mesure qu'il la pénètre, et comme les sels de ces acides sont de bons tampons, ils peuvent maintenir un pH relativement bas pendant des périodes assez longues. Stephan (48) rapportait en 1944 que le pH salivaire diminue rapidement, si on fait rincer la bouche avec une solution de glucose. Cette chute du pH est plus sensible chez les sujets atteints de carie que chez les résistants. Si les bactéries disséminées dans la bouche peuvent ainsi abaisser le pH de la salive, à plus forte raison, dans une plaque dentaire, où les bactéries abritées en grande concentration derrière une sorte de membrane protectrice, peuvent avec rapidité élaborer les acides et maintenir un pH favorable à la dissolution de l'émail. Le sucrose alimentaire est un excellent substrat pour les fermentations bactériennes. Mais, même en son absence, la portion glucidique de la mucine salivaire peut se séparer de la portion protéique par l'action d'enzymes protéolytiques et servir de substrat au processus de la fermentation, (23), sans oublier que le glucose est aussi un constituant normal de la salive (60), comme nous l'avons déjà signalé.

Jusqu'ici les faits sont en parfait accord avec la conception de Miller, les données bactériologiques et biochimiques soutiennent bien cette théorie. Du point de vue histologique, si l'on a affaire au type de carie blanche à évolution subaiguë, (nous voulons dire ce blanchiment de l'émail qui s'accompagne de matité et de porosité si faciles à observer en clini-

que, surtout au collet des dents, et qui dans les radiographies se traduit par une légère opacité sur la pellicule,) alors rien ne semble déroger à la théorie déjà mentionnée. Mais lorsqu'il s'agit de caries de points et de fissures, la séquence des phénomènes déjà décrits est sujette à plus d'une interprétation. Gottlieb (24) a tenté d'expliquer ce que les cliniciens appellent la carie noire, à évolution chronique, laquelle apparaît aux points de contact et au fond des sillons.

2.—Théorie de la protéolyse.

L'examen histologique de l'émail d'une dent, après son éruption, révèle la présence de lamelles qui souvent vont de la cuticule de l'émail à la limite émail-dentine. Ces lamelles s'apparentent au point de vue clinique à la cuticule de l'émail (membrane de Nasmyth); elles sont relativement riches en matière organique, car leur affinité pour les colorants ne laissent pas de doute sur la nature organique de ces éléments histologiques. Comme nous l'avons cité déjà, on a identifié une kératine dans la cuticule de l'émail. Ces lamelles sont plus nombreuses aux faces proximales, et à la région du collet et principalement dans le cas des prémolaires et des molaires au niveau des sillons buccaux et occlusaux.

Les points, où apparaît ordinairement la carie, coïncident avec les régions où les lamelles sont en plus grand nombre, autrement dit avec les régions où les vestiges de la cuticule de l'émail sont susceptibles d'être retrouvés. Ces ponts de matériel faiblement calcifiés entre la dentine et le milieu extérieur sont les foyers tout désignés pour permettre à certaines bactéries d'exercer leur action protéolytique. Ces bactéries peuvent facilement adhérer aux embouchures de ces lamelles, liquéfier ce matériel et s'introduire jusqu'à la dentine, laissant la voie ouverte aux bactéries aridogènes qui, par la suite, vont miner tout à loisir les parois calcifiées qui les emmurent (schéma II). Le critère principal sur lequel Gottlieb appuie sa théorie est la pigmentation noire de l'émail qui coïncide avec l'envahissement microbien et qui se manifeste bien avant que l'explorateur ou la radiographie ne puisse déceler la lésion. Cette pigmen-

TABLEAU II

AGENTS	% Reduction de Carie	Notes Bibliographiques
Fluor dans eau d'alimentation . .	50-60	(3)
Fluor en applications topiques . .	30-40	(37)
Ag NO ₃	?	(37)
Vitamine K	60-90*	(21a)
Pénicilline	35-65	(61)
Détersifs	?	(56)
Restriction des sucres	80	(5)
Brossage	40-60	(21b)

*Ces observations ont porté sur des petits groupes.

tion est due à l'imprégnation de mélanine par la matrice de l'émail. Or, il est prouvé que la mélanine dérive de la tyrosine, qui est un acide aminé retrouvé dans beaucoup de protéines. Sous l'action des enzymes, dont la dopa-oxydase, la tyrosine se transforme finalement en mélanine. La mélanine est très répandue dans tous les tissus animaux. C'est elle qui est responsable de la coloration foncée des viscères, des cheveux, des mélanomes, etc.

Toutefois, l'an dernier, Dreizen et ses collaborateurs (16) ont réussi sur de l'émail décalcifié à reproduire une coloration brune similaire à celle que l'on observe dans les dents cariées en mettant en contact avec la surface de la dent des produits dérivant du métabolisme du glucose chez les bactéries, comme le mythyl-glyoxal et l'acétyl-méthylcarbinol.

Frisbie, Nuckolls et leurs collaborateurs (22) de l'Université de California en plus de confirmer les vues de Gottlieb ont réussi à identifier la présence de bactéries dans les lamelles de l'émail et d'une façon plus évidente encore dans les canalicules de la dentine. Les premiers envahisseurs seraient des microorganismes sphéroïdes. On remarquera que jusqu'à présent la démonstration est bien logique et la théorie semble sérieuse. Même si les critères de Gottlieb sont à l'opposé de ceux de Miller, les faits expérimentaux soutiennent bien cette conception. Nous sommes donc en face de deux mécanismes très différents. Alors que Miller et ses adeptes situent le danger "extra-muros", c'est-à-

dire dans le milieu extérieur, dans le milieu buccal, Gottlieb et son équipe le situe dans la dent même, dans une défec-tuosité du mécanisme histogénique.

3.—Théorie de Pincus.

Il y a quelques mois, Pincus (44) apportait une nouvelle explication qui semble vouloir concilier les deux théories précédentes. Ses travaux personnels ont porté sur l'identification de mucoprotéine dans les fissures occlusales, des molaires incluses et dans la membrane de Nasmyth, qui se retrouve intacte sur ces dents. Or, les mucoprotéines libèrent à l'hydrolyse des protéines et de l'acide chondroïtine-sulfurique. L'acide chondroïtine-sulfurique peut à son tour s'hydrolyser et donner d'autres composés, dont un hexosamine, un acide hexuronique, de l'acide acétique et de l'acide sulfurique. Il existe dans les tissus vivants un enzyme, une sulfatase, qui peut détacher de l'acide chondroïtine-sulfurique le groupement sulfate. Pincus a démontré que les bactéries du genre *Protéus* peuvent sécréter une sulfatase et libérer l'ion sulfate des mucoprotéines. Certains protéus, notamment le *Protéus Vulgaris*, ont été identifiés comme des hôtes fréquents de la bouche.

A l'aide de ces données, on peut maintenant spéculer, même si c'est prématuré. La plaque dentaire contient des bactéries protéolytiques qui scindent les protéines lamellaires; simultanément les acides issus de cette réaction ramollissent les cristallites des prismes de l'émail. Cette nou-

velle façon d'envisager le mécanisme initial de la carie a soulevé plusieurs objections; entre autres, l'acide sulfurique ainsi formé est en trop faible quantité pour décalcifier vraiment l'émail, sans parler des conditions d'expérimentation insuffisamment contrôlées. Quoi qu'il en soit, nous sommes en face d'une conception heureuse, et nous sommes d'avis que la voie, qui vient de s'ouvrir, saura nous rendre d'excellents services dans les méthodes de contrôle de la carie.

III) MESURE D'ACTIVITE DE LA CARIE

Avant de traiter ce sujet, il est essentiel de connaître comment nous pouvons nous rendre compte des progrès opérés sur nos patients, quand nous faisons l'emploi d'un traitement approprié. Nous avons à notre disposition plusieurs méthodes de mesurer l'activité de la carie en clinique, ou mieux au laboratoire clinique.

1. Parmi les plus connues nous avons la méthode de Hadley, (26) basée sur le décompte des lactobacilles dans la salive. On en calcule le nombre par millilitre de salive. Par comparaison avec les standards, on peut ainsi apprécier l'activité de la carie.

2. Le test de Snyder (47) a pour principe la vitesse de production d'acide par les bactéries et la quantité d'acide retrouvé dans la salive. Un échantillon de salive est mélangé à un milieu de culture contenant un colorant: le vert de bromocrésol. Le tout est incubé à 37° C. Si après un laps de temps déterminé le milieu reste vert, le test est négatif. Un changement de coloration vers le jaune avant 72 heures accuse une certaine activité.

3. Le test de Wach (53) repose sur le pH salivaire et la production d'acide. A trois millilitres de salive non stimulée, on ajoute 0.4 ml. d'une solution de glucose à 1%. On incube à 37° C pendant 4 heures, on détermine ensuite le pH colorimétriquement et on dose l'acide formé par de l'hydroxyde de sodium centinormal.

4. Le teste de Fosdick (20) s'appuie sur le fait que la solubilité de l'émail est accrue quand la salive et les bactéries qu'elle contient, transforme rapidement le glucose en acides. On mettra en présence un volume connu du mélange salive-glucose

et une quantité déterminée de phosphate tricalcique solide. Ce sel est insoluble en milieu alcalin mais se dissout à mesure que le pH diminue. Par dosage du calcium, on trouve la quantité qui a passé en solution dans la salive. Cette méthode atteste une corrélation de 85% avec le diagnostic clinique.

5. Le test de Dreizen (14) se fait en mesurant le pouvoir tampon de la saliva. Connaissant la quantité d'acide lactique, qu'il faut ajouter pour atteindre un pH donné, on peut évaluer l'activité de la carie, sachant que le pouvoir de neutralisation de la salive est inversement proportionnel à cette activité. Les groupes de sujets résistants à la carie ont donné une valeur moyenne de 0.615 ml. d'acide lactique décinormal pour ramener le pH à 4.0. Pour les sujets affichant une activité moyenne de carie, on apporte une valeur de 0.484 ml. Dans les cas de carie avancée, la valeur atteint 0.353 ml.

Même si considérés individuellement, ces test ne sont pas d'une exactitude indiscutable, l'utilisation simultanée de plusieurs d'entre eux donne des renseignements fiables. (Tableau I).

IV) METHODES DE CONTROLE DE LA CARIE

Que le point de départ de la carie soit dans l'émail même de la dent ou dans une déficience de la salive à neutraliser les produits acides des bactéries, malgré toutes ces discussions académiques, il reste vrai qu'un agent capable de diminuer l'activité bactérienne peut concourir à la prévention ou à la diminution de la carie. Car, qu'il s'agisse de déminéralisation ou de protéolyse, les bactéries interviennent toujours dans les mécanismes dégénératifs. D'ailleurs il est plus sous notre contrôle d'agir sur le facteur microbien que d'essayer de modifier l'histogénèse de la dent en général. C'est pourquoi la plupart des chercheurs, dans le but de soulager les populations de ce malaise, ont eu recours aux substances chimiques afin de vérifier si quelques unes d'entre elles ne présenteraient pas des propriétés inhibitrices sur les bactéries de la bouche, tout en ne provoquant aucun signe de toxicité pour l'homme. Et les efforts ne

se bornent pas uniquement à cet aspect; les facteurs généraux continuent d'être l'objet d'enquêtes scientifiques et nous verrons qu'une diète bien équilibrée ne nuit en rien à la santé des dents et enfin que l'hygiène buccale de pratique courante, peut encore aider à la prévention des effets de la carie. Comme l'action des substances chimiques ne s'exerce pas au même point du mécanisme de la carie, nous les grouperons selon leurs propriétés respectives. C'est ainsi qu'on aura les inhibiteurs des enzymes bactériens, comme l'urée, la pénicilline, la vitamine K synthétique et la furacine; les substances détersives qui dégagent la dent des plaques adhésives; et les agents, qui imprégnés dans l'émail, comme les fluorures ou le nitrate d'argent, peuvent lui conférer une plus grande résistance. Enfin de l'usage du vaccin antilactobacillaire, encore à l'état expérimental, on peut espérer en tirer des applications prochaines. En étudiant ces diverses méthodes nous serons nécessairement amenés à les critiquer. Ceci s'impose d'autant plus qu'il faut se méfier des excès de la publicité. L'inefficacité de certains produits peut dans un intervalle prochain jeter beaucoup de discrédit sur la profession dentaire. Il ne faut pas en blâmer le public. Avidé de découvertes sensationnelles, il ne sait pas, dans la réclame qui le submerge, faire la part du vrai et du faux. Comme les dentifrices à l'urée et à l'ammoniac, par la radio et par la presse, ont acquis une réputation tapageuse, nous allons en traiter aussitôt.

1.—Urée et ammoniac.

Kesel (35) a observé que la salive des sujets résistants à la carie contenait un principe de nature volatile inhibiteur du *L. Acidophilus*. L'analyse chimique a rapidement révélé son identité. Il s'agissait de l'ammoniac. Par ailleurs, on sait que l'urée est une excellente source d'ammoniac. Les uréases bactériennes hydrolysent facilement l'urée et libèrent l'ammoniac et le gaz carbonique. L'usage de dentifrices, contenant 3% d'urée et de phosphate d'ammonium dibasique, contribue à diminuer la carie chez 45 sujets comparativement à 10 témoins dans la proportion de 60%. Un récent rapport at-

teste que sur une période d'un an et demi, 220 patients accusent une diminution de carie de 41% (31).

Au premier abord, ce rôle inhibiteur de l'ammoniac semble assez paradoxal, si l'on rapporte les résultats antérieurs de Howe (30a). Il trouvait que les phosphates, dont le phosphate d'ammonium à faibles concentrations, stimulent la croissance des lactobacilles. Mais il appert des travaux de Kesel qu'une concentration assez forte de phosphate d'ammonium produit un effet contraire sur la reproduction des bactéries acidogènes. Le mécanisme d'action proposé serait qu'en présence d'un fort taux d'ammoniac les bactéries nitrifiantes se trouvent dans des meilleurs conditions de milieu, ce qui leur permet d'exercer leurs actions antibiotiques à l'égard des bactéries acidogènes, notamment les lactobacilles. Kesel (34), dans une tentative d'identifier les microbes responsables de cet antagonisme a démontré que les filtrats d'*Aerobacter Aerogenes* (un hôte habituel de la cavité buccale) inhibaient la croissance de *Lactobacillus Acidophilus*. White et Hill (59) ont repris les travaux de Kesel. Ils rapportent que les filtrats d'*A. Aerogenes* "in vitro" sont antibiotiques à l'égard de *Lactobacillus Acidophilus*, seulement quand les conditions de croissance sont idéales pour l'*Aerobacter Aerogenes* et que le pH du milieu est de 8.0. En d'autres circonstances, c'est *L. Acidophilus* qui inhibe l'*A. Aerogenes*. L'acide lactique produit par le lactobacille ne serait pas responsable de l'inhibition d'*A. Aerogenes*. La seule espèce, qui a montré des propriétés antibiotiques à l'égard du lactobacille, est le *Pseudomonas Aeruginosa*. Tout dernièrement Jenkins (32) et son équipe viennent de porter un dur coup aux explications de Kesel. L'ammoniac n'aurait aucun rôle inhibiteur sur la production d'acide lactique, ni sur la croissance des lactobacilles, selon Douglas (13). Les résultats de Howe et de Hill seraient donc confirmés, à savoir que le phosphate de sodium a le même effet que le phosphate d'ammonium, puisqu'il ne s'agit plus que d'une question de pH alcalin. De plus, le phosphate d'ammonium ne favorise pas la transformation de

l'urée en ammoniac, il l'inhibe en ralentissant l'activité des uréases salivaires. Enfin dans les dentifrices où la concentration en urée est grande (22%), les uréases sont fortement inhibées.

Les travaux de Kesel originent des résultats de Grove (25). Ce dernier prétendait que le principe actif qui inhibait le lactobacille était l'ammoniac. Sullivan et Storvick (50) n'admettent qu'une corrélation négative entre la présence de carie et l'ammoniac de la salive, et Fosdick (40) vient de communiquer que l'ammoniac apporté par les dentifrices, même si on lui accorde des propriétés avantageuses, ne persiste pas assez longtemps dans la bouche pour intervenir dans la résistance à la carie.

Pour résumer cette discussion, que l'ammoniac ait un effet inhibiteur sur la carie, comme certaines statistiques le concèdent, il devient difficile maintenant, à la lumière des faits que nous venons d'exposer, d'accorder une valeur de premier ordre à cet agent.

2.—Pénicilline

L'usage de dentifrice additionné de pénicilline a démontré l'action nettement inhibitrice de cet antibiotique sur la carie. Les expériences menées par Hill (57) mettent en évidence, chez le rat, cette influence de la pénicilline. Quand les rats sont soumis à un régime carigène, la carie attaque 22.5% des dents, tandis que l'addition de pénicilline diminue cet effet à 9.3%. Chez les enfants d'âge scolaire de 8 à 15 ans, le dentifrice, contenant 1,000 unités de pénicilline au gramme, a réussi à abaisser la population buccale des lactobacilles dans la moitié des cas (28). Toutefois, il est à noter que cette diminution n'est que passagère. Si l'on supprime la pénicilline, quatre mois plus tard, le taux des lactobacilles revient à son niveau initial (58).

Sachant que l'action de la pénicilline est surtout efficace sur les espèces Gram positif, donc sur les lactobacilles, on comprend que la flore buccale augmente sa population de bactéries Gram négatif, à mesure que l'action antibiotique de la pénicilline se manifeste. Les espèces qui bénéficient le plus de la disparition des

lactobacilles sont l'*Aerobacter Aerogenes* et *Escherichia Coli* (59).

La pénicilline (21c) à la concentration 1.0 mgm et l'auréomycine à 0.5 mgm par 100 cc. de salive sont les seuls antibiotiques actifs contre les bactéries Gram positif, à manifester une action persistante dans la bouche. La pénicilline se retrouve dans la plaque dentaire jusqu'à 24 heures après son introduction dans la bouche. L'auréomycine a une action encore plus durable. Seulement il ne faut pas perdre de vue que ces antibiotiques sont des médicaments trop précieux pour généraliser leur emploi à des fins telles que le contrôle de la carie dentaire, en dépit du fait que Zander (61) et beaucoup d'autres en préconisent l'usage.

3.—Vitamine K

On peut apporter les mêmes restrictions quand il s'agit de la vitamine K synthétique (2-méthyl-1, 4-naphtoquinone) ou ménadione que Fosdick (21a) a incorporé dans de la gomme à mâcher. Dans une étude systématique entreprise avec les vitamines, dans le but de connaître leurs effets sur le pouvoir neutralisant de la salive, Fosdick a remarqué que cette vitamine inhibait la production d'acide "in vivo," de même que certains dérivés analogues comme la 2,6-méthyl-benzoquinone. En incorporant l'un de ces composés à la gomme à mâcher, on a pu noter que son usage entraînait une diminution de 60 à 90% par comparaison avec les témoins. Ce résultat serait attribuable au fait que ces quinones retarderaient les processus de dégradation des hydrates de carbone dans la bouche. Cette étude nécessite encore des données plus complètes, même si un excès de vitamine K ne paraît pas provoquer de signes de toxicité. Fosdick (21c) vient d'admettre que la vitamine K synthétique ne persiste pas assez longtemps dans la salive et dans la plaque pour être utilisée dans les dentifrices. Il semble insinuer que l'usage d'un composé de ce genre ajouté aux sucres alimentaires préviendrait efficacement la fermentation bactérienne.

4.—Furacine et ses dérivés.

Dreizen (15) a récemment étudié la furacine (semi-carbazone de la 5-nitro-2-furaldéhyde) et ses dérivés en rapport

avec la flore buccale. Ces substances sont de faible toxicité, stables et non irritantes. Elles jouissent de propriétés bactériostatiques et bactéricides "in vitro" sur les bactéries Gram positif et Gram négatif. Une dizaine de ces composés s'est montrée efficace dans la réduction du nombre de lactobacilles et de la production d'acide. Deux d'entre eux, (1a 2, β -méthyl-semi-carbazone de la 5-nitro-2-furaldéhyde et la 2, β -hydroxyl, 1-éthyl-semi-carbazone de la 5-nitro-2-furaldéhyde) se sont montrées des inhibiteurs enzymatiques puissants. Leur action s'exercerait surtout sur les déshydrogénases. Leurs coenzymes, la thiamine et l'acide nicotinique ne pourraient plus se régénérer. L'incorporation de ces composés aux sucres pourraient être de quelque utilité.

5.—Fluor

a) Dans l'eau d'alimentation

Le mécanisme d'action du fluor est encore à l'étude, mais aux concentrations, où il agit dans la prévention de la carie, on ne peut plus lui prêter une action inhibitrice sur les enzymes. On sait que le fluor fait partie de la structure du micro-cristallite de l'émail et que plus l'eau de consommation en est riche plus sa proportion augmente dans la dent. La fluorapatite est en effet moins soluble dans les acides que l'hydroxylapatite (2) (52). Il semble donc que l'action du fluor soit plus en relation avec la structure de la dent qu'avec les facteurs d'environnement.

De l'addition du fluorure de sodium à l'eau de consommation a résulté pour les populations urbaines, une diminution appréciable du taux de carie. Au Canada, par exemple, dans la ville de Stratford, Ontario, où l'eau contient 1.3 p.p.m. de fluor, la ville de Sarnia servant de témoin, on a observé 68% moins de carie chez les enfants de 6 à 14 ans. Aux Etats-Unis, les essais sont nombreux et les résultats sont concordants, la carie dans ces régions-tests affiche une diminution moyenne de 60%. Les compilations d'Arnold (3) l'indiquent bien. A ceux qui s'inquiètent des effets de cet élément sur l'organisme, le rapport de McClure

(41) devrait les rassurer, du moins en ce qui concerne la santé du squelette. Si la concentration atteint 4 à 5 p.p.m., l'émail manifeste la coloration typique de la fluorose (qui reste le signe le plus sensible de fluorose chronique) et le taux de carie augmente. Hodge (29) a bien mis en évidence la corrélation de ces deux phénomènes. Il est clairement établi que la concentration optimum se situe à 1-1.5 p.p.m.

b) En applications topiques

Devant la certitude que le fluorure de sodium est un inhibiteur de la carie, lorsqu'il est employé à des microdoses, on s'est vite demandé, si en l'utilisant à des fortes concentrations, on n'arriverait pas en applications topiques à surenchéir cet effet inhibiteur. Knutson (39) a étudié la question de près. Il a élaboré une technique dont plusieurs cliniciens déjà font usage. A la suite d'une prophylaxie, on isole les dents, par exemple, de la moitié gauche de l'arcade supérieure, avec des rouleaux de coton et on assèche à l'air comprimé. A l'aide d'un applicateur inhibé d'une solution aqueuse de NaF à 2%, on en mouille la surface des dents et on laisse sécher pendant trois minutes. La patient se rince la bouche afin d'éliminer l'excès. On fait de même pour la moitié droite de l'arcade supérieure et pour l'arcade inférieure. Des applications identiques doivent être faites à trois ou quatre reprises à des intervalles d'une semaine. Il est entendu que la prophylaxie de la première séance suffit. On recommande d'avoir recours à cette méthode chez les enfants dès l'âge de trois ans. On préservera ainsi leur dentition temporaire. A l'âge de sept ans, un tel traitement aux incisives et aux premières molaires permanentes d'imposerait. A l'âge de 10 ans, ce sera le tour des canines et des prémolaires et enfin à 13 ans celui des deuxième molaires.

c) Toxicité du fluor

Cox et Hodge (11) viennent de rapporter des faits intéressants concernant la toxicité du fluor. La dose minimum mortelle du NaF serait environ 4 grammes pour l'adulte, mais des signes de toxicité peuvent apparaître après l'in-

gestion de doses supérieures à 50 milligrammes. Or, comme la quantité utilisée au cours d'un traitement selon la technique de Knutson ne doit pas dépasser 2 cc. d'une solution à 2% c'est-à-dire 40 milligrammes de NaF et qu'une bonne partie est expulsée par le rinçage, ceci ne constituerait pas une objection sérieuse à son emploi. Toutefois l'usage du fluorure de sodium à la concentration de 2% doit rester exclusif aux cliniques et pour aucune considération, on ne doit permettre son admission dans les foyers. De plus, l'imbibition de la dentine par le fluorure de sodium, comme désensibilisant, après la préparation des cavités,

n'est pas recommandable à cause des effets irritants de cette solution sur la pulpe (45).

En matière d'appréciation, le fluorure de sodium reste actuellement l'agent le plus sûr, le plus économique et celui dont la diffusion est la plus générale, du fait qu'il peut atteindre toutes les populations urbaines. Comme son action intervient surtout dans la période de formation de la dent et ne se fait sentir que dans 60% des cas, il ne faut pas négliger les autres méthodes de contrôle, qui vont nous permettre d'obvier à cette lacune.

(la fin de cet exposé est remise à la livraison de septembre.)

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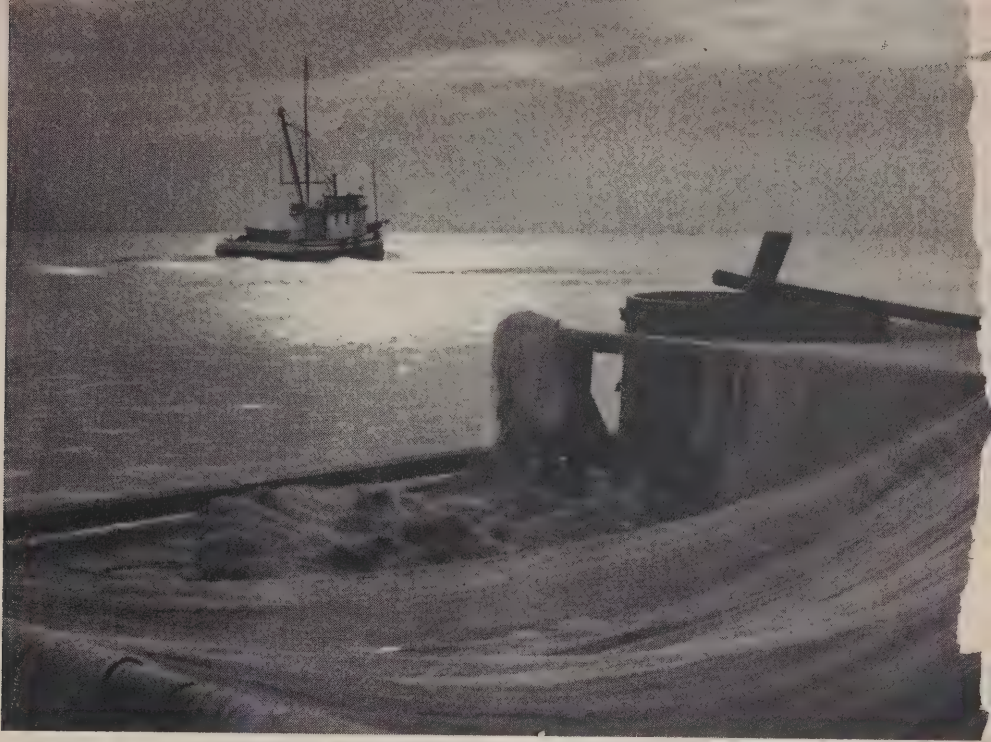


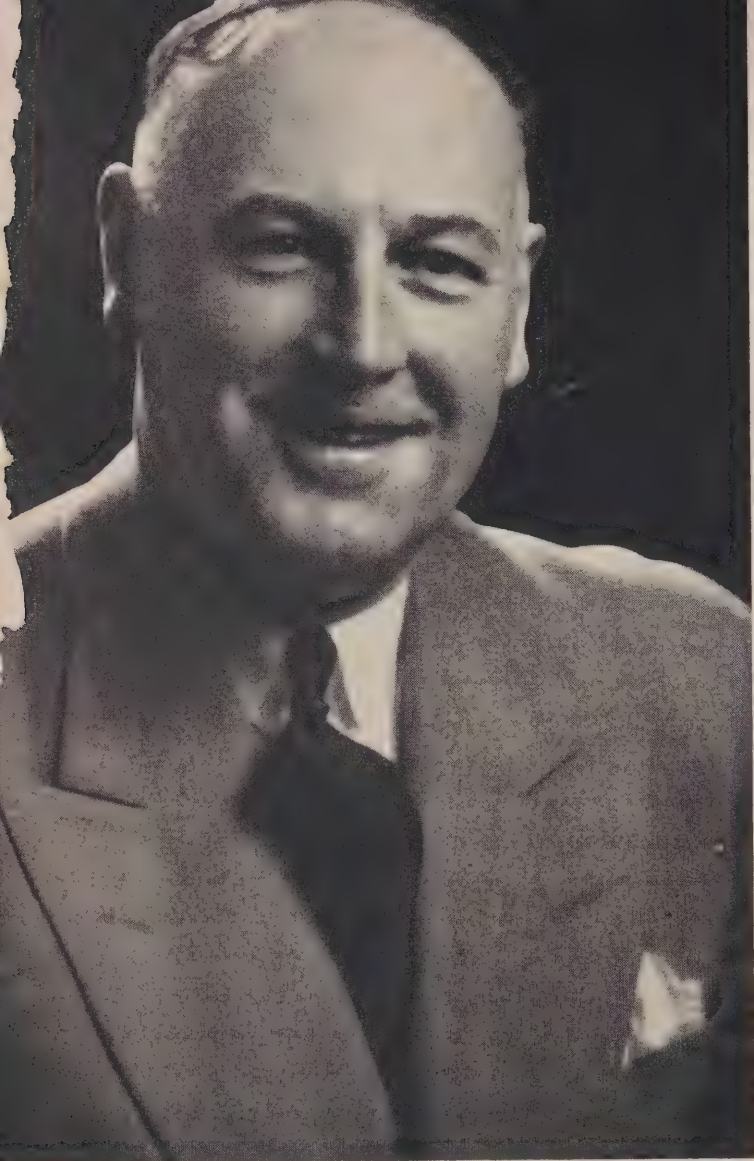
Photo by Joseph S. Bricker, D.D.S., Vancouver.

BETWEEN SHOWERS

This print has received 100% acceptance at 14 International Salons. It was taken at Stevenston, B.C., a large fishing town. It was really taken in the rain as the photographer was standing under a large golf umbrella, waiting for the sun to break through.

Talk not of wasted affection.
Affection never was wasted;
If it enrich not the heart of another,
Its waters returning
Back to their springs, like the rain,
Shall fill them full of refreshment;
That which the fountain sends forth
Returns again to the fountain.

—Longfellow.



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The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, SEPTEMBER, 1950

No. 9

WOULD HEALTH INSURANCE INVOLVE ME?*

by DR. HARVEY REID, Toronto, Ontario

AS a background for some of the observations I want to make later, may I discuss with you some interesting points of difference in three health plans I was privileged to study this past summer in Europe—the Dutch, French, and British plans. All three, it was claimed had a common purpose—(1) To bring dental service to those who could not afford it. (2) To give priority to children, expectant mothers, etc., and (3) to encourage conservative dentistry rather than extractions and dentures. Let us examine each of these plans in turn and note carefully the difference in design planned to accomplish the same objectives.

In Holland as soon as a person commences to work he pays in 2% of his wages or salary into a sick fund controlled by the state. His employer pays a like amount. Everybody with an income of less than \$1,500 can receive benefits from the sick fund. He can go to any dentist on the list. He must, at the time of receiving treatment, pay, to the dentist, a definite portion of the fee according to a fixed schedule. For fillings, etc., the proportion the patient pays is small, about 5d (10 cents) and the state pays the balance of about \$3.00. For inlays, dentures, etc., the proportion he pays is much larger, e.g.—a denture for which the dentist is allowed 100 florins

(about £10) the patient is required to pay £4½—almost half. (This is their method of encouraging conservative dentistry.)

In large cities, such as Amsterdam, children may have treatment in clinics or by a private dentist as they choose, other places in private offices.

Holland has about the same population as Canada and fewer dentists. They consider they have sufficient dentists and that the contributory nature of their scheme keeps it well under control. The fact that benefits are limited to those with an income of \$1,500 or less is another factor. If the patient is guilty of neglect, they don't hurry about giving him benefits of the plan—this is intentional.

In France, a similar fund is collected for health services (by pay deductions and taxes). The administration of the fund differs from the Dutch plan in the following ways. (1) Anyone who is on salary or wages is eligible to draw on the fund. (I was told that the president of the republic takes full advantage.) However, if you are an employer of one person you are not eligible but your employee is and you contribute for him too . . . (2) Patients go to the dentist of their choice—when treatment is completed they pay him in full according to the dentist's scale of fees. He (the dentist) then com-

*Luncheon address before the convention of the Canadian Dental Association and the Ontario Dental Association, June 17, 1950.

pletes a voucher for the patient which entitles the patient to refund from the government according to a fixed schedule which may be a large or small proportion of fees they have paid according to the fees charged by their dentist. This is known as the grant-in-aid method of payment and does not attempt to standardize dentists but encourages a dentist to improve himself and by so doing increase his financial rewards. (3) The refund schedule did not as far as I could see place emphasis on dentistry for children or on conservative dentistry but appeared to give prominence to surgical procedures. The chief criticism, I heard, was that those who needed benefits the most, the small shopkeeper, and France is made up of them, could not receive benefits.

The National Health Plan in Britain has received tremendous publicity in the public and professional press. You are all reasonably familiar with it by now but will you permit me to point out the main differences from the Dutch and French plans. (1) The British plan is all embracing and makes every man, woman and child of Britain eligible for treatment, also bonafide visitors. (2) The patient pays nothing at the time of treatment. (3) Most treatment has to have approval of the dental estimates board before commencement. (4) All dentists for patients under the plan receive the same schedule of fees regardless of their varying skill and the care with which operations are performed. (5) Priority for conservative dentistry was hoped for as fees were much better for this type of treatment.

Now, may I make some observations on these three plans. There are desirable features in each of them but may I point out what I consider are some of the worst shortcomings. (1) All three countries have, regardless of what they have planned at the beginning ended up with straight treatment services. Dental public health education plays a very minor part, if at all. The prevention and control of dental

diseases is definitely not the foundation on which these plans have been built.

(2) These plans are extremely costly, particularly the British plan which has no contributory feature, *i.e.* the patient pays nothing at the time of treatment. The patient does not know and perhaps doesn't care where the money comes from to pay for all these health services. The demand for service has far exceeded the estimates of the ministry and the profession and has definitely exceeded the ability of the available dentists to deliver a decent health service to so many. (3) The priority group, children and expectant mothers, are badly neglected in Britain. The dental estimates board with eight dentists and a staff of 800 is receiving some 40,000 applications for treatment a day of which 16,000 are for extractions and dentures. Those for extractions and dentures are approved in short order while others require weeks for approval, much correspondence, and in many cases examination of the patient by a dental officer of the ministry. It is very obvious what groups actually receive priority. It is estimated that 40% of the first year's cost of dental service under the plan was for new dentures. (4) In Britain the standard of service has deteriorated. Tremendous waiting lists, long hours and constant pressure of adverse government publicity and public opinion has forced on even the most conscientious operators a type of belt-line dentistry. This does not augur well for the health service that the public will receive nor for the professional standards of the profession.

(5) Many dentists in Great Britain have larger incomes as a result of this belt-line type of dentistry and the employment of a large staff of technicians and assistants, but they are very unhappy and fearful of the future. They know that there is pressure to lower the costs of dental service under the plan and they know that the dentists in reduced fees, will bear the brunt of any such move by the minister.

There are dentists who practising

under the plan are still insisting on delivering a conscientious service. Their incomes are drastically reduced. They are worried because the social position of the dentist in the community has definitely deteriorated and they know that much of the desirability for students to enter the profession is being dissipated.

(6) The breaking down of the school dental service and the neglect of the children in Britain will, I believe, lead to the introduction of ancillary personnel trained in short courses to supply service to the children. This would be in my opinion a dangerous and retrograde step. Varying standards of professional education have in the past brought all down to the lowest.

Now, after a cursory study of these other plans, how do Canadian Dental Association proposals measure up? In my opinion, most favourably. The C.D.A. has never at any time made any presentation anywhere asking for federal health insurance. Any proposals that have been presented have been at the request of the Federal Government. I do hope you will remember, always, that the C.D.A. proposals are an approach to the problem of dental disease, through public health, and we believe just as sound whether adopted by a community, a province, or the Federal Government; whether treatment service is paid for by the individual, the community, the province or the Federal Government.

And here I cannot forego the opportunity of saying . . . that governments do not create the money they spend. This money must be raised in taxes either direct, which everybody who is a taxpayer recognizes, or in indirect taxes which are hidden in the cost of goods and services we buy. We, in Canada, have fairly high levels of social services and social security and we have the resultant high taxes and high cost of living. Before embarking on any new health program it should be weighed very carefully whether the benefits would justify the increased burden in taxes.

To force any profession to attempt to supply service to a greater portion of the population than available personnel can supply is, I believe, the greatest menace in any health plan. As you know the C.D.A. suggests, that if a plan is to be introduced, that at first only limited age groups be included. For example, the first year 3-7 years of age—the following year maintenance of that group plus a new 3-year group making it 3-8 years and so on until age 14 or 16 or whatever age experience has shown that available dental personnel can supply the necessary treatment.

It is generally accepted that no plan can succeed in the prevention and control of dental diseases unless accompanied by a continuous and well directed program of dental health education. This program in C.D.A. proposals would be directed specifically to parents, expectant mothers, pre-school and school age children in co-operation with teachers and dentists and other health workers and all other citizens of the unit. Research in dentistry has made rapid strides in the past few years and it is reasonable to assume that much further knowledge will be gained in the prevention and control of dental diseases. Where better can this knowledge be applied than to the children that they grow up with healthy well-formed teeth and jaws (dental structures)? Surely, if we are to have a form of health insurance it is more feasible and desirable to concentrate on the younger age groups rather than have the dental profession bog down as it has in other countries trying to cope with the accumulated needs that have grown with years of neglect.

It has been said that the only measuring stick for any health program is its effect on the disease it is designed to attack. Surely the C.D.A. proposals envisage an approach that would in time have a profound effect on the prevalence of dental diseases in this country.

How imminent is a health plan spon-

sored by the Federal Government? I cannot answer that nor do I believe can anyone else—not even the minister himself. There are many political considerations—the degree of agreement among the provinces and the Federal Government at the coming provincial conference will influence greatly the timing of the next step. Of course you realize we are in the initial stage of health insurance right now. The minister announced in May 1948 that a health plan was being developed and would be introduced in three stages . . . (1) A per capita grant to each of the provinces to take an inventory of present health services and assess needs for the future, also grants for training health personnel and for extending hospital and other health facilities including training facilities. That is the stage in which we are today. The Federal Government has paid to the provinces to date some thirty millions of dollars, in each of the past two years for the above purposes. The surveys are nearly completed in each of the provinces and they include all branches of dentistry, educational facilities, personnel, D.P.H. personnel, distribution of dentists, etc. They have been very extensive and the reports should soon be reaching the health insurance studies department of the Federal Government. From these will be garnered the needs and desires of each province and then how soon we may expect the second stage—hospitalization and some medical services

and finally the third stage which would include dental services only time will tell.

And now for the title of my address "Will Health Insurance Involve Me?"

In a small town in England (that we shall leave unnamed), known as one of the poshest towns in the country, with a population made up chiefly of retired viceroys, admirals, generals, etc., the dentist who had the largest and best practice in the town a few days before the national health plan came into effect was heard to say "Of course it won't make any difference to me, my patients won't be interested." It just took six weeks to force him into the scheme. His patients said they were paying for it and they demanded the service. So I shall answer the question "decidedly yes." How much it will involve each one of us will depend on the type of plan, its soundness, the coverage and the methods set up to keep within bounds the demand for service.

If the Federal Government, through assistance to the provinces, would make it possible to have a properly trained dental officer with adequate salary and with competent staff in every health unit in Canada, it would be, I believe, the greatest step forward ever taken in the prevention and control of dental diseases and the cost would be but a small fraction of the cost of any plan to supply treatment services.

TELEPHONE

Here is the place where many patients are either won over to you or they are permanently lost. Since my assistant takes care of my telephone, that is the first thing I teach a new girl. She has a prescribed procedure that she follows religiously if she expects to remain in my employ. Among other things she must be courteous, patient, and helpful.

For example, if a patient calls and wants immediate service, and many of them do, especially new patients, we do not refuse them and let it stand at that. We either refer them to someone else or invite them to come in and find someone to take them. Do not ignore a patient who insists upon talking to you. Either talk to him or call him back. Just remember this, everyone that walks into your office or calls you on the phone does so voluntarily, so treat him with the same respect you would ask for yourself.—R. C. Curry in W. Virginia D. Jour.

CYSTS OF THE MANDIBLE

by DR. GEORGE A. MORGAN, Toronto, Ont.

CYSTS of the mandible may be defined as structural cavities which have an epithelial lining. This lining in turn has its origin in epithelial cells, cell rests or debris which remain in the mandible and which are stimulated to activity and growth by some form of irritation, generally either infective or traumatic in origin.

In the mandible the radicular cyst is the most commonly observed cystic tumor, followed in order of frequency by the dentigerous cyst and lastly cysts of nondental and traumatic origin.

The cyst wall varies greatly in structure and diameter, it may be quite thick and fibrous, or no thicker than writing paper, and quite transparent. The cyst contents vary just as markedly; it may be thin, clear or amber colored, or it may resemble soft cheese in consistency, or be very thick and granular, presenting a metallic sheen due to cholesterin degeneration.

As cysts enlarge, the surrounding bone becomes resorbed and thinned out, giving an eggshell crackle on palpation and is finally lost, permitting the fibrous wall of the cyst to unite

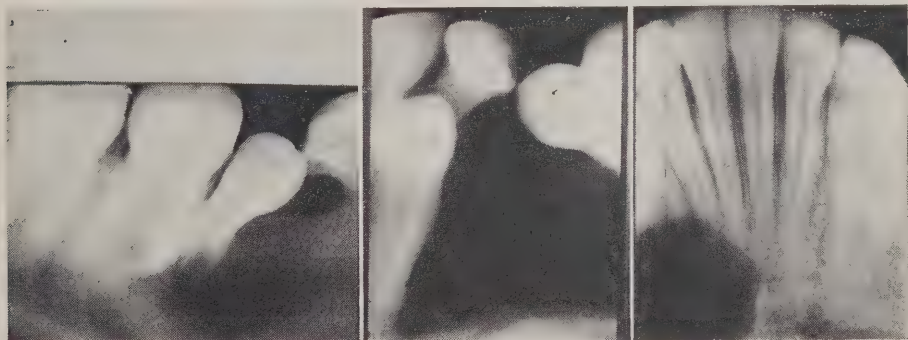


FIG. 1

Large mandibular cyst extending from the distal of the first molar to the median line.

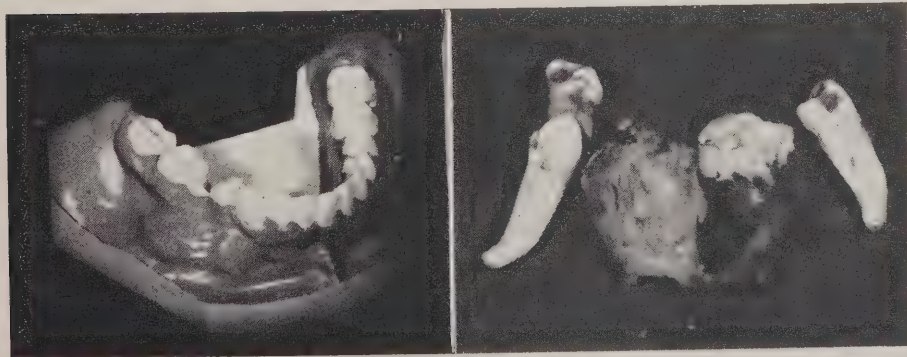


FIG. 2

Photograph illustrating degree of cystic swelling.

FIG. 3

Photograph illustrating teeth and cyst removed.



FIG. 4

Illustrates degree of filling in of cystic cavity eighteen months after operation. Note that the anterior teeth and the first molar have been retained.



FIG. 5

Photograph of model illustrating retention of ridge and teeth eighteen months after operation.

with the periosteum. As cysts encroach upon the root ends of teeth, the cementum and dentine may also become resorbed. Nerve trunks, such as the mandibular, may be stretched and pressed aside and the fibrous wall of the cyst may fuse with the connective tissue wall of the nerve sheath. The nerve pressure and displacement account for the discomfort and pain complained of in some of these cases.

The first stage of cyst formation seems to be root-end granuloma in which epithelial cords present have been stimulated to proliferate. Proliferation and degeneration of both the epithelial and the connective tissue elements of the granuloma proceed to the formation of a definite cyst wall that slowly enlarges with the gradual

increase in the cyst contents. These cysts therefore, develop about the root ends of teeth that have erupted and have become infected. They usually grow quite slowly, and may become so large as to destroy almost completely, the bony substance of the mandible.

RADICULAR CYSTS

Aided by proper dental x-rays the problem of diagnosis usually presents a little difficulty. The presence of a pulpless or devitalized tooth, presenting in the x-ray a denuded root end in relation to a large circumscribed area in which the alveolar process has become lost, is the typical picture. Treatment of the radicular cyst is essentially removing the lining membrane, allowing the cavity to fill in with granulation tissue. The incision should be, not on top of the ridge, but to one side, usually the buccal, so that the natural contour of the ridge is preserved for prosthesis. Teeth should not be extracted until the membrane is removed, as the cyst may be found on the lingual or buccal side of the roots of the teeth, which the dental x-ray shows to be involved. Such a case is illustrated Fig. 1-5 inclusive.

DENTIGEROUS CYSTS

Dentigerous cysts are derived from a portion of the developmental dental follicle. Whether or not the tooth or its crown is completely surrounded or

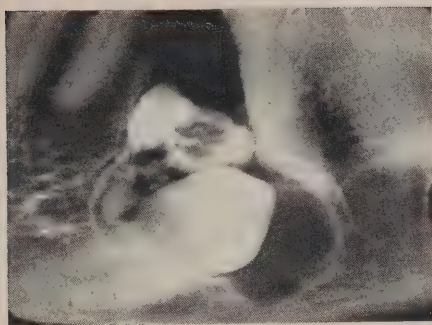


FIG. 6

Dentigerous cyst about an impacted bicuspid, which in turn has been impacted by a suppressed, decalcifying, deciduous molar.



FIG. 7

Dentigerous cyst about an impacted anterior. Note filling in of cystic cavity with cholesterol crystals.

the cyst lies under or above the tooth, partially surrounding it, will depend on whether or not the proliferation of the epithelial debris occurs superficially to the tooth or not. These cysts are found closely attached to an unerupted, often malformed and usually malposed tooth. The cyst wall usually encircles the tooth at the cemento-enamel region, and the crown projects into the cyst cavity. The root, if at all formed, is usually outside the cyst wall and generally firmly embedded in the



FIG. 8

Photograph illustrating large Dentigerous cyst about a third molar. Note size of cyst and that third molar has been pushed down to the border of the mandible.

alveolar process. Such cases are illustrated. Figs. 6, 7 and 8.

THE ADAMANTINOMA

This form of cystic tumor arises from the cells which have to do with enamel development. Hence the name "adamantinoma." Because of the lobulated appearance usually seen in the x-ray, less often clinically; and the almost universal tendency to form cysts within its substance, this tumor in Europe has more frequently been called a "multilocular cyst." A large adamantinoma or multilocular cyst is illustrated in Fig. 9.

CYSTS OF TRAUMATIC ORIGIN

Cysts of traumatic origin may be observed in the mandible and are as a rule similar to the non epithelial-lined cysts of long bones secondary to traumatic haematoma. Thoma is of the belief that the decomposition of fibrin causes an irritation which leads to resorption of the cancellous portion of bone to form a cavity.

Dental x-rays reveal a cavity in the bone along the course of the inferior dental canal with no apparent connection with the roots of the overlying teeth. These cysts may be easily mistaken for residual cysts or pathological

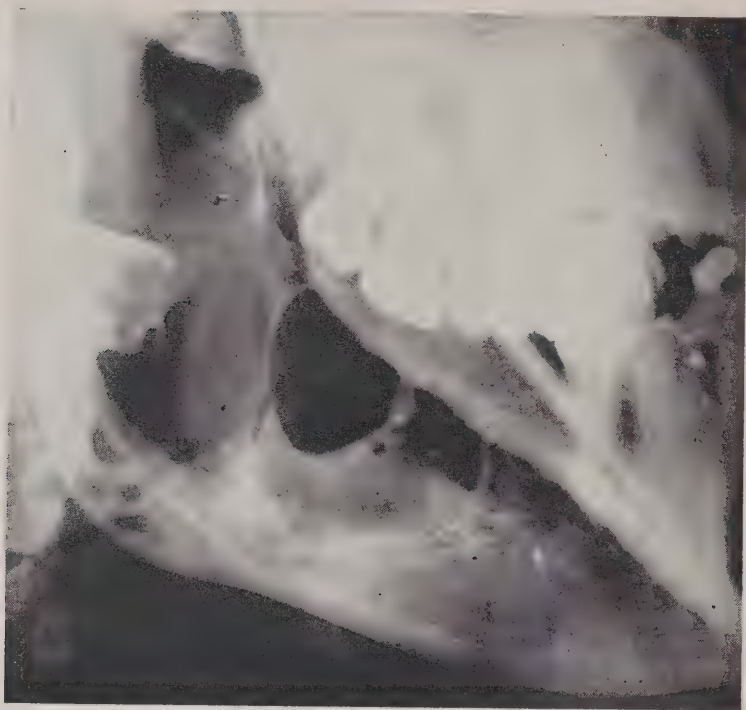


FIG. 9

Photograph illustrating Adamantinoma or Multilocular cyst.

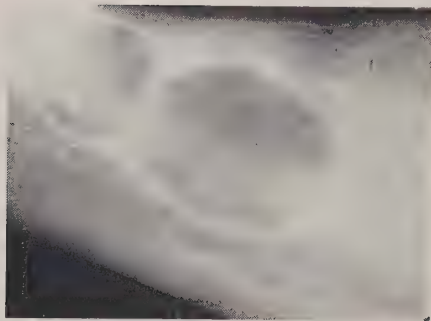


FIG. 10

Illustrates Residual cyst in otherwise dense bone. Note definite demarkation of cystic cavity.

areas which have been left following the removal of teeth, hence exploration may be necessary for diagnosis. If the cavity is unlined and the contents present evidence of haemorrhage, traumatic origin is probable. If of short duration gross blood may be

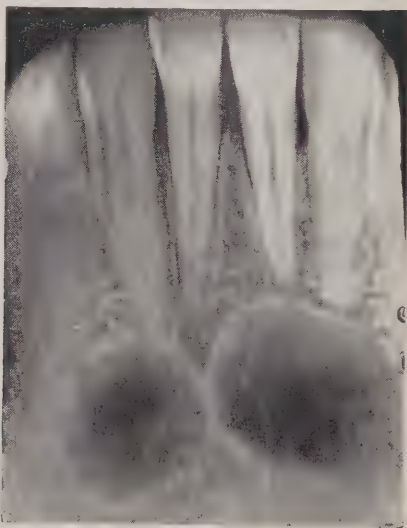


FIG. 11

Cyst of Traumatic origin. Note that Periodental membrane of all anterior teeth in proximity to cysts is intact.

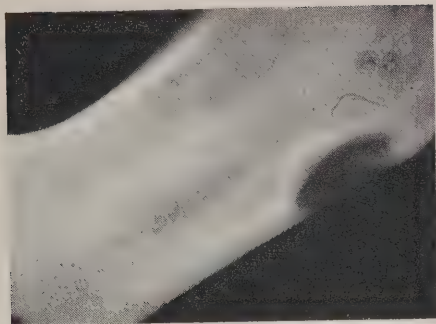


FIG. 12

Illustrates cyst of Indeterminate origin at angle of jaw.

present whereas a straw-coloured fluid containing microscopic evidence of degenerated blood and cholesterol crystals denotes an older cavity.

Usually évacuation of the contents of the cyst will be sufficient treatment. Such a case is illustrated, Fig. 11.

CYSTS OF INDETERMINATE ORIGIN

Stafne of the Mayo Clinic reports a series of 35 cases in which bone cavities of cystic roentgenological appearance were observed at the angle of the jaw. These cavities are believed to be congenital and to have no direct bearing to any systemic condition. Low believes that it is possible that a cav-

ity could result and persist from a failure of normal deposition of bone in the region formerly occupied by Meckel's. Because of the location of these cysts, many of them are missed, due to the fact that full mouth dental x-rays do not include this region. A cyst of this type is illustrated in Fig. 12.

COMMENT

In the treatment of cysts of the mandible, several thoughts are worthy of consideration.

1. Cysts of the mandible, while they appear large, are not as a rule comparable to a similar appearing size cyst in the maxilla. This is due to the comparatively thin buccal-labial lingual width of the mandible.
2. If the cyst is removed first and the teeth involved in the cyst, second, many functionally useful teeth will be preserved.
3. The complete enucleation of the cystic wall and its contents allowing the bone cavity to fill in with a normal blood clot, seems to be the best method of treatment.
4. In large cysts a packing of Oxygel or Hemo-pac of the gauze type serves to control haemorrhage and help fill up the bone cavity without a noticeable delay in filling in of normal bone.

Résumé:

Dans le traitement des kystes de la mandibule, plusieurs aspects doivent être pris en considération:

1—Si le kyste est d'abord énucléé et les dents en rapport avec le kyste extraites, dans un deuxième temps, plusieurs dents utiles à la mastication pourront être conservées.

2—L'énucléation totale de la membrane kystique et de son contenu, permettant à la cavité osseuse de se remplir d'un caillot sanguin normal, paraît être la meilleure méthode de traitement.

3—Le remplissage des kystes volumineux d'Oxycel ou d'Hémo-Pak (genre gaze) aide au contrôle d'hémorragie et à la néo-formation osseuse dans la cavité, sans délai appréciable.

THIS IS SUCCESS

To be able to carry money without spending it, to be able to bear an injustice without retaliating; to do one's duty even when one is not watched; to keep on the job until it is finished; to accept criticism without letting it whip you.—"Alexander Cooperator."

NATIONAL BROADCAST ON DENTISTRY

by THE CANADIAN BROADCASTING CORPORATION

ON May 20 a CBC mobile unit visited the scene of the convention of the Canadian Dental Association and the Ontario Dental Association to record some of the highlights.

The first speaker was **Dr. John R. Thompson**, Professor of Orthodontics at Northwestern University, Chicago, Illinois. Dr. Thompson spoke as follows:

"Dental health and hence general health will be improved not by social controls, rules and regulations but by a threefold program consisting of (1) public health education (2) the use of modern preventive methods, and (3) the expansion of research facilities and studies so that we may understand more about the diseases that we're attempting to control.

"It's important that children start visiting the dentist as early as two and a half years of age—and these visits should start before they require dental treatment such as fillings. This will establish friendly relations between child and dentist. Later, when certain treatments become necessary, the youngster will accept them and be proud of his accomplishment. This procedure means the child is already started on the road to being a good and happy dental patient for the rest of his life.

"While the child is still young, the dentist can discuss the causes of tooth decay with the parents and can apply the methods of prevention that are known today.

"He will emphasize that the child should have a dental examination every four months in order to prevent and control tooth decay. He will also point out that baby teeth are important—not only for chewing—but that they guide the permanent teeth into their proper positions.

"Loss of certain key baby teeth before the normal time is one of the most common causes of crooked teeth.

"Now are there reasons other than appearance as to why straight teeth

are an asset? Certainly—we know that a mouth in which teeth occupy their correct positions is a healthier mouth and that those children with straight teeth are more likely to be free from psychological disturbances. We live in a face conscious society—irregular or crooked teeth very often spoil facial features and result in nick-names such as Bugs Bunny, or Buck Tooth. While these may be amusing to those who don't have the deformity, they are a psychological handicap to the victim. It is gratifying to see such children change not only in appearance but in morale, school-work and so on, when their teeth are straightened.

"In conclusion, I can say that the teeth not only influence the local and general health of the individual but also may play an important role in moulding his personality."

Dr. Victor L. Steffel, Professor of Prosthetics and Chairman of the Partial Denture Department at the College of Dentistry, Ohio State University, spoke as follows:—

"Neither an artificial eye nor an artificial limb serves as well or looks as well as the original. But artificial teeth can be better-looking and, in some cases, more efficient than those provided by nature. It is said one cannot improve on nature but it is not a true statement as pertains to dentistry.

"So this statement is a bit of cheer for people with bad teeth, discoloured teeth, and no teeth at all.

"In the past eight years, acrylic, a plastic, has come into great favour in the making of complete or partial dentures. Partial dentures are those removable appliances which supply only part of the missing teeth. Teeth made of plastic material are slightly resilient and can be fused into plates of the same material, whereas porcelain teeth must be fastened mechanically. Of course, porcelain teeth are harder, but they are more likely to chip.

"Plastics, therefore, are among the best things that ever happened to the dental profession. They're nonporous, which means no 'denture breath' for the person whose smile has been enhanced by a nifty set of efficient chewers, and dentures which are excellent in appearance.

"In recent years, all types of replacements have 'undergone great refinement'. They're nothing like those Paul Revere made in the 1700's. They are functional and good looking."

Dr. E. W. McHenry, Professor of Public Health Nutrition at the University of Toronto, spoke as follows:—

"The amount of tooth decay in Canada can be decreased by better food habits. Tooth decay is caused by acid produced in the mouth by bacteria and the acid is made from sugar. The consumption of sugar has increased markedly in Canada in recent years. Canadians now obtain one-seventh of their food energy from sugar but sugar makes no other contributions to the diet. It lacks minerals and vitamins. Two other cheap sources of energy, cereals and potatoes, supply protein, minerals and vitamins. Low-income families need to spend food money wisely by reducing purchases of sweet foods and by using the money for healthful foods like milk, fruit and vegetables.

"Children who drink small amounts of milk have been found to spend twice as much money on sweet foods as do children who use milk liberally. Sweet foods, especially just before meals, dull the appetite and prevent the eating of proper amounts of healthful foods.

"Properly formed, healthy teeth are more resistant to decay than poorly formed ones. To obtain good teeth it is necessary to start in pregnancy; expectant mothers should receive ample calcium from milk and at least 800 units of vitamin D a day. The vitamin D cannot be obtained from common foods—it must be secured as a special supplement. These nutrients are commonly given to infants but must also be consumed by pre-school and in-school children.

"Public Health programs began with sanitation, the control of the safety of water supplies and with disposal of sewage. For many years after the monumental work of Pasteur, of Koch and of other pioneers in bacteriology, the attention of public health officials was devoted to the control of infectious diseases. The modern public health program is much wider in scope; it is an attempt to control all of the environmental factors which influence health. Of these factors, nutrition has been recognized as one which is important. There has been abundant proof of the relation of nutrition to growth, working efficiency and health.

"The effect of nutrition on dental health is as well established as its influences upon health in general. The results of a number of studies can be cited to show that the type of food eaten has a definite bearing on the incidence of dental caries. Tooth decay has been described as the most prevalent evidence of malnutrition in Canada.

"Nutrition may influence the occurrence of tooth decay in two principal ways: (1) what mothers eat during pregnancy and during the time they're nursing their children and what young children eat, may affect tooth structure and consequently alter the resistance of teeth to attack by destructive agents; (2) the presence or absence of these destructive agents may depend upon the type of food consumed.

"Of the several explanations of the mechanism of the production of dental caries, the most plausible, and the one which appeals to me as most consistent with all observations, is the attack on tooth structure by acid produced from carbohydrates through bacterial action. If we assume that this is the best available explanation, the attention of those concerned with nutrition must be directed to consider the type of nutritional program which should be adopted to reduce the occurrence of caries.

"The most obvious approach to elimination of dental caries is reduction in the intake of carbohydrates. What is

meant by a reduction in carbohydrates? Does it imply a lessening in the use of all carbohydrates, including starches and sugars, or does it refer to a more restricted conception, a decreased use of sugar and of foods containing quantities of sugar? I propose to examine these questions in some detail because the answers to them are important not only from the viewpoint of caries control but also from the general nutritional aspect.

"On the average, Canadians obtain about 30 per cent of their food energy from cereals and about 6 per cent from potatoes, a total of more than one-third of food energy from two foods. These foods are rich in carbohydrate and they are used plentifully because they are cheap. Actually, Canadians secure one-half of their energy from carbohydrate and, of the total energy furnished by carbohydrate, the two foods, cereals and potatoes, contribute 56 per cent. The proportion of food energy obtained from carbohydrate is a reflection of the economic circumstances of a people. Well-to-do persons eat less carbohydrate and consume more fat. But, even in a prosperous country like Canada people secure one-half of their food energy from carbohydrate. The nutritional insufficiency which gives the earliest evidence is a lack of calories. If working efficiency and if health are to be maintained, the continuous need for energy must be met by the meals eaten. If the carbohydrate is reduced, there must be an increase in protein and in fat; these two sources of energy are more expensive than carbohydrate. A decrease in the proportion of carbohydrate in the diet means an increase in cost. I think we should remember this when we talk about carbohydrate restriction.

"The two foods, cereals and potatoes, which supply over one-half of the carbohydrate and over one-third of the energy obtained from food by Canadians, are important in other ways. One-third of the average total intake of vitamin C in Canada comes from potatoes and they are a cheap source of that vitamin. Cereals supply Canadians with

over one-fifth of their total consumption of iron, of thiamine, and of niacin. A marked reduction in cereals and potatoes, our two main carbohydrate-rich foods, entails a decreased intake of iron and of three vitamins. This loss can be compensated by the use of other foods but the cost will be increased.

"There is considerable evidence that a restriction in the consumption of carbohydrate for even a short period will cause a reduction in the number of acid-producing bacteria in the mouth. That may be the case, but is it likely that the effect of a brief restriction in carbohydrate will be long-standing? The acid-producing organisms are present in the air we breathe and in many of the foods we eat. Surely the number would again increase if favourable conditions, meaning a restoration of the former carbohydrate intake, were again established. It seems to me that all that should be hoped for from a temporary carbohydrate restriction is a temporary decrease in acid production. That could be said to be desirable but I do think we should remember that a long-standing restriction in total carbohydrate intake is fraught with complications.

"What about sugar and foods like candy, cake, pastry and soft drinks which are rich in sugar? Canadians obtain about one-seventh of their total food energy from sugar; sugar is responsible for one-fourth of the total intake of carbohydrate. Sugar and most of the sweet foods are negligible sources of minerals and of vitamins. It could be argued that sugar, like potatoes and cereals, is a cheap source of energy. That is true, sugar, unlike potatoes and cereals, has no other significant nutritional value. The quantity of sugar in the diet can be reduced without additional expense and without any serious effect on supplies of vitamins and minerals. Indeed, the replacement of sugar by almost any other source of energy will almost certainly mean an improvement in the nutritional value of the diet.

"Aside entirely from lessening a source of acid for the production of

dental caries, I believe that decreased use of sugar and of sweet foods is desirable for two other reasons. Sweet foods contribute practically nothing except calories; they are negligible sources of protein, of minerals, and of vitamins. Families, having limited amounts of money for the purchase of food, waste that money when they buy and use sweet foods generously. The use of money for foods of high nutritive value is essential if low-income families are to obtain adequate nutrition. It has been said frequently that parents cannot afford to buy milk for children; in a recent study of some Toronto children we found that those children who were drinking little milk were spending twice as much money for candy and soft drinks as were children who were using generous amounts of milk.

"There is an additional reason for urging a restriction in the use of sweet foods, particularly by children. Sweet foods dull the appetite and, if taken shortly before a meal, will prevent the consumption of adequate amounts of healthful foods. All of our studies on school children have shown that those children who have generous amounts of sweet foods are the ones who are most unlikely to obtain a nutritionally adequate diet. I am convinced that the liberal use of sweet foods by children in Canada is an important factor in preventing them from having proper amounts of the foods needed for health. It should be made clear that persons concerned with public health nutrition have as good reason for advocating a decrease in the consumption of sweet foods as have members of the dental profession. This is one common goal.

"In a program designed to control dental caries by alterations in food habits, a restriction in the use of sweet foods is one important feature but it should not be the only one. Considerable mention by many persons has been made to studies on the incidence of dental caries in European children and especially to a report by Sognaes of the Harvard School of Public Health. That report has been used as an argument

to prove that sugar consumption is unrelated to dental caries. In my opinion the report does not prove that sugar consumption is unimportant but it does indicate that the structure of the teeth is an essential factor in the production of dental caries. This is not surprising because there is ample previous evidence that tooth structure is important and that properly formed teeth are more resistant to caries. A sound nutritional program for the control of tooth decay begins with the pregnant mother, carries on in infant feeding and continues through the rest of life. The second point in our nutritional plans should be to ensure adequate supplies of the nutrients needed for tooth formation, beginning in pregnancy and continued in infancy and early childhood. The nutrients to which attention must be given are calcium, phosphorus, vitamin D, and vitamin C. Intakes of milk, of vitamin D, and of dependable sources of vitamin C must be adequate.

"At this time I shall recapitulate my opinions regarding a nutritional program for diminishing the incidence of dental caries. The program commences by urging adequate supplies of nutrients needed for tooth formation during pregnancy. The same nutrients, again in proper amounts, should be supplied to infants and to young children. The program recommends a restriction in the use of sweet foods not only to control caries but to ensure healthful supplies of better foods.

"The control of dental caries is not the only consideration in planning a nutrition program from the aspect of preventive dentistry. The relation of nutrition to the structure of the jaws and to the maintenance of healthy gums should be considered. Evidence indicates that vitamin C, and perhaps other vitamins, may be related to the health of the gingival tissues. Efforts to ensure adequate supplies of Vitamin C are important and should be included in any program of nutrition for the prevention of dental disease.

"I turn now from a consideration of nutrition from the aspect of preven-

tive dentistry to a discussion of nutrition in general. Before a program of public health nutrition can be planned intelligently it is essential to obtain answers to three questions: (1) what are present nutrition conditions; (2) if malnutrition exists, what are the reasons; (3) what can be done to prevent malnutrition. Let us attempt to answer those questions for Canada.

"Studies on food use in various parts of Canada in recent years have shown marked similarity in conditions from one region to another. Generally, Canadians use generous amounts of meat and are unlikely to lack protein. From the viewpoint of nutrition we do not need to be concerned about the consumption of bread, potatoes, butter or margarine, and eggs. We do need to be concerned about the intake of milk, vitamin C, vitamin D, and of sweet foods. Numerous studies on school children have shown that 30 to 40 per cent of children consume grossly inadequate amounts of milk and of dependable sources of vitamin C. The same studies have demonstrated that large numbers of children, in some cases up to 90 per cent of those examined, do not receive significant amounts of vitamin D during the fall, winter, and spring.

"Why should such conditions exist in Canada? For most of them there is only one valid reason and it is a combination of apathy and ignorance. The proper amount of vitamin D for a school child can be purchased retail for one cent a day; the cost for a month is one twentieth of the children's allowance paid by the Dominion Government. As a matter of plain facts the cost of a healthful supply of food for a child is less in Toronto at present than the cost of the unhealthful intakes which many children receive. The major cause for unintelligent use of Canada's ample food supplies is not economic.

"I urge your support of a plan of nutrition education, which is concentrated on food used by children and which emphasizes healthful amounts of

milk, of vitamin D, of foods supplying vitamin C generously, and which urges a decreased consumption of sweet foods. The acceptance of this program would not only diminish the occurrence of dental disease but would have a beneficial affect upon health generally."

Dr. L. S. Fosdick, Professor of Chemistry at the Dental School of Northwestern University in Chicago spoke as follows:—

"Tooth decay is no longer a mystery. The dentist knows most of the factors that cause tooth decay and he knows many ways in which it can be prevented and controlled.

"Most of the methods of prevention are governed by the daily habits and procedures of the individual, so that for prevention, most people must change old habits for new ones.

"It seems to me that if people knew how tooth decay happened, they could decide for themselves the best way to look after their teeth.

"When concentrated sugars are eaten, for example, the portion that remains around the teeth is rapidly changed to acids. If the sugars are not removed by the saliva and self-cleaning ability of the mouth, tooth decay is inevitable. Since our modern diet contains an ever-increasing amount of sugar, nature's protection against caries is now insufficient as far as most people are concerned. People nowadays eat about one hundred pounds of sugar each year more than they did a century ago.

"So, in order to prevent or control tooth decay, you either have to prevent acid from forming on the surface of your teeth or else increase the natural protection against acid. The latter can be accomplished by eating well-balanced, alkaline ash diets. This means diets rich in fresh fruits, vegetables and dairy products. And as far as the formation of acids is concerned, you can prevent this by therapeutic measures, the omission of sugars from the diet. Or if you want to have your cake and eat it too, clean your mouth well immediately after eating. If the sugars

are cleansed from the mouth before acids form, tooth decay won't develop. In most cases the maximum acid potential comes twenty minutes after eating but in some cases it is as short a time as three minutes. Only your dentist can determine the proper diet and the type of cleansing procedure necessary for each individual case. If you're willing to follow the necessary procedures then you can prevent decay.

"Research is attempting to provide simpler methods of control in which the objectionable routines for prevention may be avoided."

Another of the speakers at the convention we had hoped to record was

Dr. Hermann Becks, Professor Dental Medicine at the University of California in San Francisco. This we couldn't arrange but Dr. Becks gave us a copy of the paper he presented and here is a summary of some of the material in it:

For some years, Dr. Becks has been concerned with finding out whether it's possible and whether it's practical to prevent tooth decay on a large scale by dietary means. As evidence of the success of the research he has carried out, he presented the results to two, five-year projects. We shall summarize the results of one of these.

Dr. Becks explained that as a lead in setting up this project, there was evidence to indicate that the use of refined sugar and candy was a key to the problem. So, his department set out to make large-scale tests of this and two factors apparently related to it. These tests would take in the excessive eating of carbohydrates (the classification that includes sugar) . . . the incidence of tooth decay itself . . . and the

lactobacillus index—this is the count or ratio, in a person's saliva, of acid-forming bacteria, . . . the bacteria that turn sugar to acid by fermentation.

Dr. Becks explained that the first phase of this clinical study was the selection of twelve hundred and fifty patients with rampant dental caries—people whose teeth were decaying so rapidly the dentist couldn't keep pace. It was found that in almost ninety per cent of these people, the acid bacteria or *lactobacillus* index was very high. Contrariwise, in the control group of more than two hundred and fifty people free from caries, this index stood at less than one thousand.

The second phase of this study made use of the group suffering from badly decaying teeth. These people were counselled to cut down their consumption of carbohydrates and their progress was followed by a monthly acid-bacteria count to discover the effectiveness of their change of diet. Over eighty per cent showed a significant drop in the *lactobacillus* index.

The third phase consisted of detailed dental examinations that provided almost eight hundred, one-year observations. These people had been chosen in the first place because they had developed at least ten cavities in the previous year. But during the year of regulated diet, more than sixty per cent of the group developed no cavities at all, and half of the other forty per cent developed only one or two.

So from this project, Dr. Becks drew two conclusions. Dietary control of the amount of sugar eaten is effective in cutting down tooth decay and the control of caries can be indicated by regular *lactobacillus* or acid-bacteria counts.

Résumé de la conférence du docteur E. W. McHenry

Il est temps, s'il n'est pas trop tard, de faire l'inventaire de nos efforts à répandre l'éducation au sujet de la nutrition. Nous devrions diriger nos activités, dans ce domaine, vers les enfants, parce que nos ressources pécuniaires et humaines sont limitées. Des études faites sur les conditions présentes indiquent que nous devrions insister sur le lait, la vitamine D, des sources sûres de vitamine C et prôner une diminution de nourriture sucrée. Ce programme est souhaitable pour l'état général. Il y a plus qu'une coïncidence que ce menu, destiné à l'amélioration de la santé, soit exactement celui qui répond le mieux aux exigences des la dentisterie préventive.

Deux façons de faire sont inutiles et même indésirables.

The Forum

PENTOTHAL SODIUM ANAESTHESIA FOR DENTAL SURGERY IN OFFICE PRACTICE—A REVIEW OF 3,434 CASES

by JERRY A. MILLHON, D.D.S., Springfield, Ill.

Condensed from Current Researches in Anaesthesia & Analgesia, June, 1950

The purpose of this paper is to present observations on 3,434 cases in which thiopental sodium (pentothal sodium, Abbott) was the anaesthetic of choice for dental surgery in the dental office.

Lundy et al point out that "pentothal sodium anaesthesia does not seem to have untoward effect on the normal heart or one in which minimal disease is present . . . the one outstanding and definite contraindication to intravenous anaesthesia is a cardiac condition in which advanced myocarditis exists, particularly if dyspnea is present." Shortness of breath with the mildest exertion and edema of the extremities are clinical signs of such a condition.

The diabetic and the patient with angina pectoris should receive special consideration. If possible, it is preferable for diabetic patients to have sugar free urine for three consecutive days before proceeding with any dental surgery. The patient with a history of angina pectoris is asked to allow 1/100 grain nitro-glycerin tablet to dissolve under his tongue upon entering the office. More can be used if necessary.

While pentothal sodium is given to children 10 years of age or under, it is preferable not to use it alone. The pentothal sodium should be used for induction, and anaesthesia maintained by nitrous oxide and oxygen. The needle is allowed to remain in the vein, however, so that, if needed, more sodium pentothal can be given. Often children dislike the dizzy postanesthesia period, and are fretful and restless.

With severe infections of the floor of the mouth associated with swelling and edema, extreme caution should be exercised in giving pentothal sodium, because of difficulty in maintaining an airway.

The patient rarely receives any form of premedication since only light anaesthesia is needed for dental surgery. The drugs of choice for premedication are usually barbiturates.

All patients with known heart diseases are asked to breathe 100 per cent oxygen through the nasal inhaler of the gas machine for at least a minute prior to induction with sodium pentothal.

Patients are encouraged to partake of their regular meals before operation, but to eat lightly and avoid greasy foods.

Oxygen should always be available because of the hazard of laryngeal spasm.

Some type of suction apparatus should be available for maintaining a clear field of operation and for clearing the mouth and throat of excess mucus. After the patient is seated in the dental chair, artificial appliances are removed, and tight fitting garments and ties are loosened.

It is important to take the patient's blood pressure, for a patient with a low blood pressure will frequently require less of the anaesthetic drug, and usually will have an abnormally long recovery period.

The chair is placed in a slightly reclining position, and as relaxation occurs, the chair is tilted backward to

prevent the patient from sliding down. The headrest is placed under the occiput so that the head is slightly forward. The arm is immobilized by a wrist strap to an armboard attached to the dental chair arm, thus preventing displacement of the needle.

As induction is begun the mouth prop is placed in position while the patient is still conscious and cooperative. Induction of anaesthesia is started by a rather rapid injection of 5 cc. of the 2.5 per cent solution. It usually requires twenty to thirty seconds for the initial dose to take effect. The patient is asked to indicate when he first feels sleepy. With beginning loss of consciousness an additional 5 cc. of the solution is injected. Debilitated and elderly patients tolerate the drug well, and usually require less of it. Alcoholics, athletes and adolescents, however, are resistant and require larger doses and more frequent injections for maintenance. The anaesthetist or assistant must support the mandible to maintain a free airway and avoid the danger of mechanical obstruction to respiration.

Before beginning the operation, the airway is walled off by sea wool sponges to protect it from blood and possible foreign particles and to absorb mucus. During operation a light surgical stage of anaesthesia is maintained by intermittent injections of

from 2 to 3 cc. of sodium pentothal, as needed.

With completion of the operation, the dental chair is returned to normal position, the headrest is adjusted to support the head slightly forward, the sea wool sponges and mouth prop are removed and a two and one-half inch square piece of gauze, of several thicknesses, is placed over the operated area.

Three to five minutes after operation, usually the patient is sufficiently awake to move himself from the dental chair to an adjacent chair fitted with casters on which his right hand is first placed for orientation. He is next wheeled into a recovery room and helps himself into bed.

In the recovery room the patient is made to lie on his side, and repeatedly encouraged to expectorate any accumulated blood.

As soon as consciousness has returned and diplopia has cleared, the patient is asked to sit up. Some patients with vertigo following anaesthesia are relieved by black coffee or tea.

Patients are not permitted to drive a car to their home nor to leave the office after the operation until they are steady on their feet. The length of time a patient is in the office varies from fifteen minutes to an hour and a half. The duration of operation and the amount of anaesthetic dictates length of recovery time.

STUDIES ON THE EFFECT OF FLUORIDES ON THE HARDNESS OF ENAMEL

by RALPH W. PHILLIPS, B.S., and MARJORIE L. SWARTZ, B.S., Indianapolis

(Conclusions of paper in *Jour. of A.D.A.*, May, 1950)

The Tukon Tester was used to study, by means of hardness changes, certain variables involved in the use of fluoride compounds. This was an *in vitro* study and any conclusions concerning the clinical application of these data must be considered in that light. However, this type of study does offer a different laboratory method of evaluating various therapeutic reagents and, as in the case of solubility studies, it can be effectively used as a

screening procedure before, and in conjunction with, clinical tests.

A 1:10,000 concentration stannous fluoride mouthwash showed a protective action in terms of maintaining the enamel hardness when subjected to the action of acetic acid.

A prophylactic cleansing mixture of stannous fluoride-hydrogen peroxide sodium metaphosphate increased the enamel hardness + 7.6 per cent after five minutes of brushing. The results

with this paste, however, were not as good as those secured when an aqueous solution of the same concentration was used.

The depth of fluoride penetration was studied by means of hardness measurements. After 15 minutes of treatment with a 0.2 per cent sodium fluoride solution, the harder enamel layer is still present after three min-

utes of brushing with coarse laboratory pumice.

Tests run on teeth of various age groups, ranging from 10 to 59 years, indicated no great difference in the reaction to the fluoride solution. However, these surfaces exposed to the reagent were not the normal outer enamel layer.

EXCESSIVE CITRUS JUICE CONSUMPTION. CLINICAL OBSERVATIONS OF ITS EFFECT ON SUPERFICIAL AND DEEP TISSUES OF THE ORAL CAVITY

by HENRY HICKS, D.D.S., Greenwich, Conn.

Summary of paper in J.A.D.A., July, 1950

Over a period of 15 years, observations were made on patients who habitually drank large quantities of citrus fruit juices. Seven cases, out of more than 50 equally striking ones in the author's record, are reported herein, and seem to show that ingestion of excessive amounts of citrus fruit juices causes many systemic effects as well as local effects on the oral cavity.

Citrus fruit is an excellent source of vitamin C, which is necessary for con-

nective tissue repairs. Although the ingestion of citrus fruit in moderate amounts as a source of vitamin C in the diet is not to be condemned, it would seem that more than two or three oranges or one grapefruit per week is excessive, in view of the fact that vitamin C is obtainable from other sources.

The current popular belief that ingestion of large quantities of citrus fruit juices is healthful should be carefully appraised.

THE ROLE OF THE DENTAL HYGIENIST IN PUBLIC HEALTH AND EDUCATION

by MARCH K. FONG, MRS., B.S., M.Ed., Oakland, California

Condensed from J. of Cal. State D. Assoc., June, 1950

In the four-way program for the promotion of dental health for the public that has been advocated by the American Dental Association which consists of: 1—Dental Health Education, 2—Dental Research, 3—Dental Care, 4—Dental Planning, the dental hygienist has and will continue to play an increasingly important part. This will be particularly so in the area of dental health education. Her role in this field cannot be standardized, but has varied with the needs and characteristics of the community.

The staff in dental health education at the University of California are

conscious of these needs. Basically, it is felt that:

1. She must be versed in educational methods and pedagogic techniques. This requires that she must have an understanding of human behavior.

2. She must unquestionably have a sound and functional biological background—a dental biological background. She must know the fundamentals of preventive dentistry in the terms and language of the dental profession. This in turn she must translate to the people. Health, dental health, is not a scientific secret. We only need reliable translators to bring

to the professions and the people a common understanding.

3. She must have an awareness of human relationships. Emphasis must be placed on her dealing and working with people. The fields of education, public health and social welfare have been leading into an era in which much consideration is being given to the interaction of people and groups. They are showing to the waking world that motivation, human progress and learning come in large part through a sharing and exchange of human thought, effort and interest.

Now let us consider the public health functions of such a dental hygienist. Modern health authorities have without question placed as her chief function that of a consultant in dental health education information to her community. A dental hygienist with such qualifications could be a resource person or consultant in dental health to teachers, administrators, public health workers, service groups and etc. Re-enforced with dental under-

standings and organizational techniques she could be the resource leader in promoting adequate dental health programs for the community. As such a liaison person between the dental profession and the public her assistance would be immeasurable for promoting better dental health. Such a dental hygienist could serve in the area of in-service and pre-service education of teachers or any such individuals needing this help. Public health workers, teachers, and administrators are anxious for assistance in their progress in dental health education. They want help and they need motivation. There is also the area of developing authentic and functional dental health education materials which has been sadly neglected. A dental hygienist so qualified could develop teachers' guides, outlines, and resource units in dental health education. This hygienist could demonstrate methods in dental health education. We have thus developed a "spark plug" to the community dental program.

NOTES ON DENTAL ECONOMICS

by JAMES ROBINSON, Executive Secretary, Southern California State Dental Association
Condensed from Oregon State D. Jour., May, 1950.

Production management is the greatest need in dentistry today. Most dentists need courses in how to render service faster and better.

Once the dentist becomes more efficient and more accurate with his work, production naturally steps up. But this is not enough. He must acquire the best possible auxiliary help. This, in the ideal situation, includes a chair assistant, a secretary, a hygienist, and a dental technician.

After ten years of practice, if you and members of your staff are rather consistently working after five-thirty o'clock, your office is either inefficient or needs additional help.

Never hire anyone who does not have to work for a living. Staff members must live within comparatively short distances of the office. Find out what their social plan for living is.

Sound business practice demands good auxiliary help and good pay. Low-priced help is expensive.

You can step up production in your office by selling spare jackets and dentures. Every patient needing this type of service should be given the opportunity to buy spares as insurance against accident or misfortune. The price for spares should be a great deal lower.

A dentist is in business whether he likes it or not. He has a bank account, employs people, pays rent, has a letterhead, business phone, typewriter, filing cabinet, desk and bookkeeping system. That is all any business man has, except for an advertising department.

The average dental practice suffers the loss of two out of three patients each five year period. Only a minor

portion is lost through death or removal to distant abodes. The reasons for such a fearful turnover in patients are multitudinous, but good dentistry, sound fees, proper grace in handling people, would retain many of these patients.

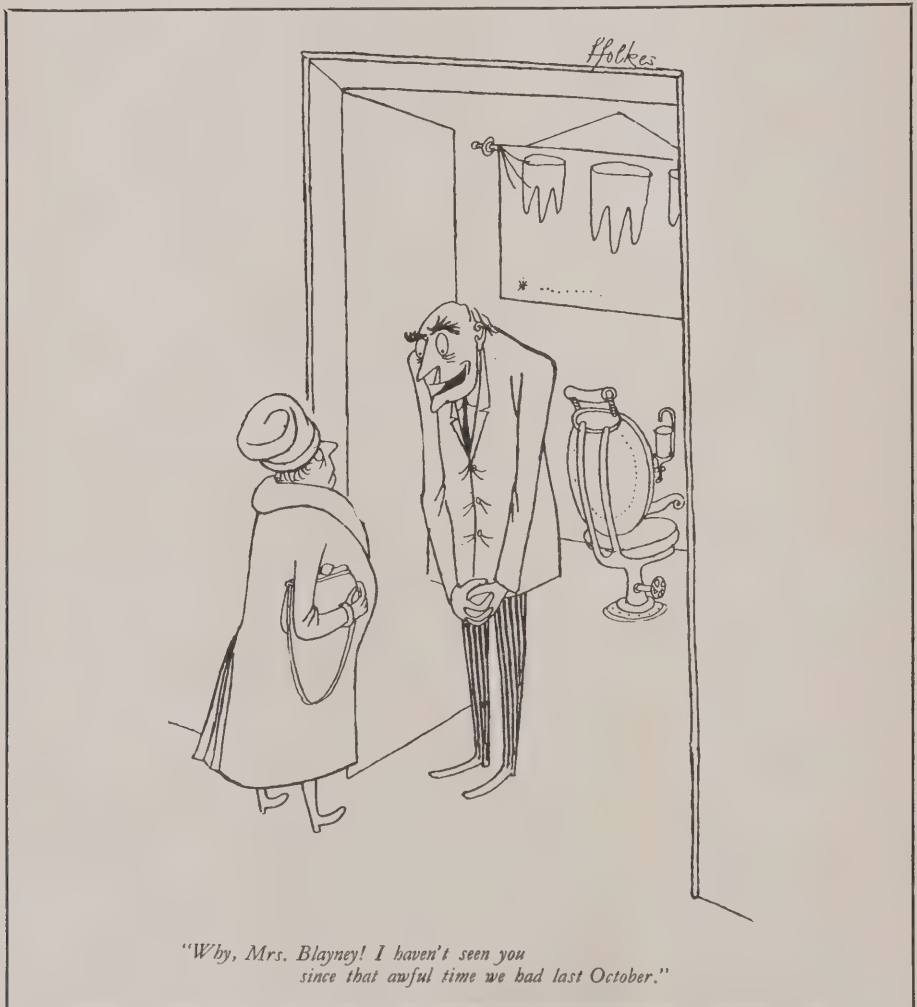
More people stay away from dental offices on account of money than threat of pain. There is a greater price consciousness on the part of the buying public when dentistry is being considered.

Personality is made up, largely, of your figure, apparel, voice, gestures,

and mannerisms. These are surface things, but enhance good impressions. Personality may be acquired. A good personality opens the door for you but only character keeps you inside.

The dentist's name, and that of each member of his household and office staff, should appear at regular intervals on the notification list for mouth prophylaxis. Subscribe to the same services as recommended to patients. A well-groomed mouth is a sight for the gods.

Use coloured napkins on the pa-



tient's chest. They are easier on your eyes.

Keep cases of two sizes for patient's eyeglasses. Place four by four J & J napkin inside the case and ask patient

to enclose her glasses. This ensures safety, promotes service, and displays thoughtfulness.

If a patient shows distress in eyestrain due to operating lights, place dark glasses over her eyes.

TREATMENT CONSIDERATION FOR THE LOSS OF CHILDREN'S PERMANENT INCISOR TEETH

by JOSEPH T. HARTSOOK, D.D.S., M.S., Ann Arbor, Mich.

Conclusions of paper in Jour. A.D.A., April, 1950

It has been pointed out that during the mixed and early adult dentition periods, when hereditary and environmental factors are operating to produce changes in the dental structures which terminate in an adult dental apparatus, any treatment for the prosthetic replacement of a lost permanent incisor tooth should (1) protect the health of the remaining teeth and the associated soft tissues; (2) preserve the occlusion by maintaining space within the dentition in harmony with the patient's immediate level of dento-facial development and permitting individual growth and development to proceed after prosthetic replacement; (3) permit the proper evolution of function and speech to proceed without impediment from the loss of the tooth or the prosthetic replacement; (4) prevent the development of emotional disturbance because of unaesthetic replacement.

Further, it has been pointed out that the significance of age as a factor in planning prosthetic treatment for young patients relates to the degree of maturation of the dentition rather than the degree of individual tooth maturity or chronologic age of the child at the time treatment is planned.

During the transition period of development, while one waits for further development of the dentition, a temporary appliance may be constructed to prevent space closure and to restore the aesthetics of the mouth without interference with the growth and development of the young, changing dentition.

The restoration of choice, a fixed bridge replacement, can be employed with young patients. However, the final acceptability of such treatment awaits further scientific justification.

RESPIRATORY AND CARDIAC STIMULANTS AND RESUSCITATION

by LLOYD C. ENGLAND, D.M.D., Providence, R.I.

Summary of paper in Jour. of Oral Surgery, July, 1950

1. The dentist who administers a general anaesthetic in his office should have an emergency kit in the same room where the anaesthetic is being administered.

2. Early measures taken at the first signs of respiratory arrest are by far the most important and have the greatest chance of success.

3. Quick action is necessary. During a period of from one to two minutes, if forced oxygen and artificial respira-

tion do not revive the patient, the emergency kit must be in readiness for more drastic action.

4. Pentamethylenetetrazol and caffeine sodium benzoate are two strong allies. They are cardiac and respiratory stimulants and are very effective if injected promptly by the intravenous method. Nikethamide has long been used as a cardiac stimulant, but it is used now mostly as a stimulant for the nervous system in acute depression.

5. Atropine is used to better advantage preoperatively to reduce mucous secretions and is, therefore, an "ounce of prevention."

6. There are a few other stimulants known, such as strychnine and digitalis, but it is wiser for the dentist to familiarize himself with three or four

effective resuscitants and be sure he knows how to use them to best advantage in an emergency.

7. General anaesthesia serves a very important need in many dental offices and clinics. Every effort should be made to see that it does not fall into disrepute.

ANNOUNCEMENTS

AMERICAN DENTAL ASSOCIATION CONVENTION: The 91st annual session of the American Dental Association will be held at Atlantic City, Oct. 30 to Nov. 2.

Reservations may be obtained by applying to the A.D.A. Housing Bureau, 16 Central Pier, Atlantic City, N.J. All reservations will be handled by the Bureau.

THE FACULTY OF DENTAL SURGERY OF THE UNIVERSITY OF MONTREAL is offering a one-week post-graduate course in **ORAL SURGERY AND ANAESTHESIA**, from November 6-10, 1950, inclusive.

Doctor Harry M. Seldin, of New York City, one of the outstanding specialists of Oral Surgery in America, and Doctor Kurt H. Thoma, well-known author and professor will present a series of lectures and clinics during that course.

The fee for this course is \$75.00, payable in advance with the registration, and enrolment is limited to thirty dentists. The closing date for registration is September 1.

Cheques or money orders should be made payable to "Université de Montréal," and sent to Doctor Gérard de Montigny, Faculty of Dental Surgery, Université de Montréal.

CONTINUATION COURSES FOR GRADUATES AT THE FACULTY OF DENTISTRY, UNIVERSITY OF TORONTO:

Anatomy as Applied to Dentistry: September 13, 14, 15, 1950.

Periodontics: September 25-29, 1950.

Orthodontics: (for the general practitioner): November 6-10, 1950. Enrolment limit 10.

Cephalometric Techniques (for specialists only): November 16, 17, 18, 1950. Enrolment limit 10.

Dental Public Health Conference: November 16, 17, 18, 1950. Enrolment limit 15.

Operative Dentistry: February 19-23, 1951. Enrolment limit 10.

Dental Radiology: February 26-March 2, 1951. Enrolment limit 12.

Endodontics: March 12-16, 1951. Enrolment limit 8.

Orthodontics (for the general practitioner): April 9-13, 1951. Enrolment limit 10.

Pedodontics: April 16, 17, 18, 1951. No enrolment limit.

Dental Oral Surgery and Anaesthesia: April 23-27, 1951. Enrolment limit 12.

Periodontics: April 30-May 4, 1951. Enrolment limit 14.

Those interested are asked to inquire respecting enrolment.

Please address inquiries to: The Dean, Faculty of Dentistry, University of Toronto, 230 College Street, Toronto, Ontario.

The **19TH ANNUAL POSTGRADUATE CLINIC OF THE DISTRICT OF COLUMBIA DENTAL SOCIETY** will be held March 11-14, 1951, at the Shoreham Hotel, Washington, D.C.

Used fluorescent lighting tubes should be broken only under carefully controlled circumstances. Improper handling of these tubes may be dangerous because they are coated on the inside with a substance containing beryllium, an element poisonous to the skin.—Health News Service.

Prosperity is a great teacher; adversity is a greater. Possession pampers the mind; privation trains and strengthens it.—William Hazlitt.



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Editorial

TAKE TIME TO THINK

The other day I was surprised with a remark made by a patient who has occasion to frequently pass the Medical Arts Building in this city and the remark would apply to such a building in any city. He said, "I have noticed so often how tired the dentists look as they come out of this building following a day's work." Standing on one's feet all day and working for highly strung nervous patients is not an easy occupation.

To succeed in this profession as in any other one must work hard but do not overdo it. I was impressed some time ago by an editorial in *Medical Times* a part of which reads as follows:—

"One of the gifted columnists of the lay press recently described a popular movie star as follows:

"——— sat in the MGM commissary and exhibited all the appurtenances attendant upon her success: the gold container, gold cigarette holder, gold keys, gold chain and gold boxes for the pills to ease the digestive and nerve strains which usually result from the fight for stardom.

"Thus wealth and fame are achieved, with psychosomatic penalties which make the wealth and fame all but worthless.

"The enormous commercial output of barbiturates and gastro-intestinal sedatives, not to speak of alcohol and cigarettes, is a measure of the country's neuroticism and need growing out of the struggle for success against the stacked cards of life and fate."

A dentist rarely reaches that type of success if one can call it success but some often approach it. Is there not too much rush, too much worry

about arranging appointments, too much concentration day in and day out without a moment for meditation, for time to sit and watch things go by, time to just think. Most will say I have no time for 'meditation' and expatiate upon the activities of a full working day and so the matter is closed. It is just like the man who says "I have no time to eat" and ends up in the sick bed. The very fact that life has assumed a so much faster pace makes it essential to set aside time for meditation. Furthermore this sacred time should not be at the end of the day or over the lunch counter or after retiring at night. The time should be chosen when the mind is alert and not harassed by details, when the thoughts can be controlled, when the judgment and imagination are alert, when self-control and self-confidence are in the saddle. Thinking or meditation has a place in any busy life; it has a place in the practice of dentistry and the sooner it is realized by every dentist the better for that dentist.

If victory is to be won the enthusiasm gained from our meditation must be passed on to the partners, the hygienists, the nurses, the technicians, remembering that the torch will fall and die out if in its passage it runs against a stale and disillusioned mind. Such should be laid aside.

Dentistry offers wonderful opportunities. One should work hard but not too hard and one should take time off to think. There is never time for self-complacency. Someone has said, "Self-complacency is bad because it leads to laziness." If a man is mightily pleased with himself and with the reputation he holds among his friends, he has lost his incentive towards improving his abilities. Self-satisfaction loosens the mainspring of virtue. It is bad because it shows low ideals or a complete absence of them—and without ideals a man becomes a beast of the field. If a man thinks he is perfect he does not know what perfection is. "If a man thinks he has climbed to the summit, he has his eye on a slag heap and not on Everest." The remedy for all this is meditation or thinking; to sit down and take an inventory of ourselves, all of which takes time. There is no finality in the practice of dentistry when we can say "At last it is finished."

M.H.G.

BOOK REVIEW

Radiology of the Teeth and Jaws for Students and Practitioners of Dental Surgery and Radiology by Frank L. Ingram, D. M. R. D., L. D. S., M. R. C. S., L.R.C.P., Senior Assistant in the Diagnostic X-Ray Dept. of Guy's Hospital, London, England. Lecturer on Dental Radiology at Guy's Hospital Dental School. 160 pages. 281 Illustrations. Published by The Macmillan Company of Canada. Price \$3.00.

The x-ray shadows cast by healthy tissues in the mouth and their normal range of variations are described in Part One. The changes with disease, the more common lesions first and the rarer ones in the last two chapters,

are shown in Part Two. The author has tried to tell the story and has told it well by the illustrations.

Part One deals with the physics of the x-ray machine, processing, intra-oral radiography, occlusals and bite-wing films, extra-oral radiography and normal appearances, the endentulous mouth, children and development of the teeth. Part Two deals with caries, periodontal diseases, effects of trauma, errors of development, osteomyelitis, residual sepsis and antral infections, cysts, benign and malignant tumours, bone dysplasias and other conditions.

This practical book should prove most helpful.

M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

Colonel E. M. Wansbrough, Director General Dental Services, **Colonel C. B. H. Climo**, Deputy Director, and **Majors T. L. Marsh** and **J. K. McNally** attended the recent combined Allied Meeting of the Armed Services Field Medical Materiel Group in Montreal July 19 to July 26, 1950. Members from the U.K., U.S.A. and Canada were present.

Air Commodore G. A. Ballantyne was a recent visitor to Canada. A/C Ballantyne is the Director of Dental Services, the Royal Air Force. He was a pilot in the R.N.A.S. 1915-1918.

Major J. A. MacGowan has been promoted to the rank of Lieut.-Colonel and appointed to command the newly formed No. 14 Coy RCDC (AF) with headquarters in Winnipeg, Man. Lt-Col MacGowan was born in Tweed, Ont. He was graduated from the University of Toronto and served with the RCDC in Canada and Overseas 1939-46. On his return to Canada, he was appointed to the staff of the Director General Dental Services, Ottawa, before being posted to Western Canada.

New Trophy for Reserves—An impressive silver trophy has been presented to the Royal Canadian Dental Corps, by Dr. S. A. Moore of London, Ont., honor-



COL. E. M. WANSBROUGH, OBE, MM, ED.

ary Lt.-Colonel of the Corps. Commencing in 1951 the trophy will be awarded annually to the most efficient Reserve Force Dental Corps unit in the country, and keen competition is expected. Col. E. M. Wansbrough, OBE, MM, ED, the Director General of Dental Services, is shown above with the trophy at his headquarters in Ottawa.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Health Insurance — House of Commons:—During the 2nd Session of the 21st Parliament just concluded, the subject of health insurance, with the exception of a few questions, received little consideration until a few days previous to prorogation.

On March 16 at the request of Mr. Knowles, (C.C.F.) the Minister gave detailed answers to several questions relating to the expenditures of monies by the Health Insurance Studies Division. Lists of the names of those employed and the amounts paid for their services during the years 1946-50 inclusive, occupied some six pages of Hansard. It is noted that some 14 individuals are employed full time in this division at present.

Under consideration of the estimates

for the department on June 20, the subject of health insurance occupied a prominent place in the discussion.

The following statements on health insurance are selected from the addresses given on the work of the Department of Health and Welfare:

Mr. Coldwell: (C.C.F.) "... the time has come when the house should be considering a national health plan as a part of the social security program. I hope that the old age security committee will recommend a great advance in old age pensions, and I hope the government will accept their recommendation. When we have made this great advance then I think the problem to which we should give the highest priority in the next few years is a national health plan to make

available to our people, as freely as our primary schools now are, to our children, all the health services that the people of Canada require. I hope that such a plan can be developed in cooperation with the medical and nursing professions and all others interested in the problem, so that we shall not have a conflict of interests preventing or delaying the coming into effect of a great national health plan."

Mr. Fleming: (P.C.) "I should like to offer only a brief word on the subject of *health insurance*. I had more to say on the subject on December 9 last when the estimates of this department were being considered. At that time I drew the attention of Hon. members to the lamentable failure of the present administration to carry out the platform adopted by the Liberal party at its 1948 Ottawa convention, in relation to the inclusion of health insurance in its program of social security. This is the program that was adopted:

"The program will include health insurance, covering medical, dental, surgical and hospital health services on a contributory basis."

"There were no qualifications to that. There was no statement about waiting for another fifteen or twenty years; no suggestion about deferring it for another generation. No, the statement was straightforward, direct and to the point. I have no doubt that in the election that took place one year ago this month that plank in the platform of the Liberal party was heeded by the people, with the thought that those who subscribed to it must have meant what they said."

"... What has been done? We have asked the government repeatedly what it is going to do in relation to a national health program. We are still in the dark as to what plans, if any, the government has. The minister goes off on those long perorations about national health grants, and about waiting until the nation has digested them before he can even begin to tax his brains to carry out this promise in the Liberal platform, and meet a need which has been recognized by all parties in the house, namely the need for a national health program which will assure services of the kind here described to the people of this country."

"We are waiting. We are becoming impatient while we listen to nothing but excuses from the government for its inaction. The time has come for action. The minister is asked again to be concrete and definite, and to show some indication that action is intended. This year he has a golden opportunity in the dominion-provincial conference to meet this fall. This is an opportunity such as has not been made available to him for

some time. Let him seize that opportunity. We have not had any intimation yet from the government that the subject of a health program is even to be included in the agenda of the conference. This is to be an exceedingly important gathering, and I do hope this opportunity will not be lost. There will be many things to be discussed before the conference but here is something of major importance. I hope the minister will grasp this opportunity."

"Let me point out to him that if he has cause for complaint about being misquoted concerning the intentions of the government in this field, much of the responsibility is attributable to the fact that the government has not been doing anything in the field. The minister complained in the house the other day about being misquoted. He pointed out that he had been quoted as having said in Vancouver on June 13 that he was against any national health insurance plan for Canada, and that health insurance is and must remain a provincial problem. In his statement to the house several days ago he remarked that he had not been correctly quoted in that press dispatch, and said he had subsequently given a statement to that same newspaper correcting their erroneous report."

Mr. Knowles: (C.C.F.) "I hope there will be a report before long, this problem of health insurance is one to which we must give high priority and active attention, certainly in this house if the government is not yet prepared to give it the kind of consideration that results in legislation."

(He then reviewed the 1945 statements made by the government.)

"... one of the arguments put forward from the government side is that we should not press for health insurance until we have first increased our health facilities—our hospitals, the number of doctors, the number of nurses and the number of technicians and so on. The argument has been that there would be no point to providing money to make effective the demand for health services if those health services were not previously available."

"As against that argument I present the argument where the suggestion is made that health insurance makes possible the extension of those very services. I believe that this is one place where the law of supply and demand—although I do not refer to it very often—does seem to apply. For example, the development of the Blue Cross plans in the various provinces illustrates my point. As those plans have developed and as people have thus become able to pay for hospital services if they wanted them there has been a more effective demand for hospital beds

and hospital services generally, and this more effective demand has played a part in increasing the number of hospital beds available. I feel that if we wait until there are facilities to meet the effective demand for health services we will wait a long time, if not forever. Therefore I argue, as I have argued on previous occasions, that in the health field as between health insurance on the one hand, and more health services and other factors on the other, priority should now be given to the establishment of health insurance itself."

"... The general election referred to in that paragraph was the one of June, 1945. That has passed into history. We have had another general election, that of June, 1949, and we are now getting close to another dominion-provincial conference. The argument about agreement between the dominion and the provinces has been used so often that it is really getting worn threadbare, and the people of the country do not put much stock in it any more. They are getting to the point where they think it is just an excuse to cover up governmental inaction.

"A dominion-provincial conference is to be held this fall, however, and I join with those who have suggested that this question certainly should be discussed at the conference. I think the federal government should go to the conference not just with a readiness to discuss the matter but with a determination if at all possible to reach the kind of agreement on the basis of which legislation might be introduced at the next session of parliament. If by any chance that does not follow—and I hate to put it that way but I have known the government to muff chances before; they certainly muffed a splendid opportunity with respect to the green book proposals in 1945—if they do not accept my view and get the question settled at the dominion-provincial conference this fall, then I want to suggest to the minister something that may be a surprise to him coming from me. I suggest that at the next session of parliament he move to establish a committee similar to the committee on old age security which has been meeting during the present session."

(At considerable length he reviewed the monies voted to the Health Insurance Studies Division and listed a long series of documents produced by the division, which are evidently private for the use of the government and not for circulation.)

"In the green book of 1945, on page 30, it was suggested that the estimated cost of health insurance was \$256 million on

the basis of the population in 1941. Sometime during the session I asked the minister, through a question on the order paper, whether that estimate was still considered a good one, and the answer was no, but consideration was being given to a revised estimate. I have no doubt that a revised estimate today would be higher than that, by reason both of the increase in our population and of the increased cost of medical services. However, it should be pointed out that when we ask for health insurance, unlike asking for better old age pensions, we are not asking for a new burden on the economy of the country as a whole. Most of this money is already being spent. The difficulty is that the incidence of it is bearing too heavily on the few whom ill health hits, rather than being spread over the population as a whole. What health insurance does is to rechannel the amount of money that is being spent on health in a more equitable manner, and in a way to make it possible for all the people to get the health services that they require."

Mr. Martin: (Minister) — "Reference was made to the question of *health insurance*, and my views on this subject are well known. There is the question of the burdensome cost of hospital care, drugs, and what I might call ancillaries of that character, together with medical expenses, and I have put them deservedly last, I think. Not recognizing the situation in specific instances, but recognizing the burden of these things, I have put medical expenses last, not in terms of importance but in terms of what it means by way of economic burden on the majority of the people of Canada. I believe, as I have always believed—and I am now speaking personally—that the problem of sharing the cost of health care can be met effectively by a system of health insurance. One has to recognize that in the pursuit of that objective there are certain important circumstances to consider. I believe one of these is that nothing should ever be done to interfere with the doctor-patient relationship that has become a tradition in this country. I think anything that would interfere with the autonomy—and I mean that in the professional sense—of the doctor would be serious not only for the doctor but more particularly for the cause of good health in this country.

"I feel I should say that because it is so often suggested that the intention is to make doctors simply servants or salaried officers of the state, I believe it is important to maintain the doctor-patient relationship. It is also important to recognize, if we are going to develop a satisfactory plan, that under the constitution the primary responsibility for

health rests with the provincial governments. Some may argue that the situation should be otherwise, but that is the constitutional fact. I respect it, and I think in terms of administration it is a good thing, as well as from the point of view of developing a sound policy. I believe all these things must be carefully considered. As we go forward step by step with our social security program, we will want to make sure that each step is taken responsibly and carefully in the light of all the circumstances in order to avoid retrenchment or abandonment of programs later on which might prove disastrous, as so many hon. members know.

"The hon. member for Winnipeg North Centre referred to the proposals made by the government in 1945 which involved the recognition of the collaborative possibilities of action between the provinces and the federal government. I made a statement in this house not so long ago which I repeat, that a national health plan, in the language of the former prime minister and repeated by his successor, is looked upon as a fundamental prerequisite to the establishment of a national system of health insurance. It is all very well to say that we can wait too long for our services to be built up. One hon. gentleman said that our services were being built up now, and in the next breath he complained that we were not building them up fast enough. The fact is that we have in the past two years, in collaboration with the provinces, built over 20,000 hospital beds. Our objective was 40,000 hospital beds in five years. In less than two and a half years we have exceeded half of our total objective. We are training personnel in all branches of health activity; in the field of mental health; in the field of tuberculosis control; in the field of crippling conditions in children. We have increased the number of health units. When I say 'we have increased,' the provinces have recommended to us projects which call for the increase of public health units, and we have paid the cost of those additional health units that are being built all over the country at the suggestion of the provinces and administered by them.

"All of these public health units are a very important phase in the development of a program by which we will attempt, I hope in a responsible way, to meet what undoubtedly is a great economic burden on the masses of the people of this country. When you think that at the moment we are training under that plan over 1,500 individuals, giving them post-graduate training; training in particular phases of research, and in particular phases of public health administration, you will realize the tremendous transition that is

taking place. I hope, and I believe, it is taking place along responsible lines towards improvement of the health services, as a condition precedent to the next step. When one thinks that we have made it possible for the provincial governments alone to increase their personnel by over 2,000 individuals, one will appreciate the great preparatory steps that are being taken in connection with this matter. One could go on reciting the achievements that are the result of the joint effort of provincial and federal governments in the execution of a national health program. I have only touched a few of the highlights but they are significant in more ways than one, not only on the research side but what is being done, for instance, in the province of Saskatchewan. In that province there is a project, signed only the other day, concerning the second phase of a dental health program in the schools. One could mention the assistance that we are giving to arthritic sufferers through the arthritic and rheumatism society in British Columbia. One could single out of all these things many examples of what is being done. In other words what I am seeking to establish, and to impress upon the house, is that we are building a whole series of medical services in this country that will place us in a very strong position once we have to deal with the broader problem in collaboration with the provinces, upon whom, under our constitution, rests the primary responsibility.

"I repeat now what I said to the house. 'This program would have the added advantage of being the fundamental prerequisite of a nation-wide system of health insurance. Indeed, this program represents the first stages. The new services being developed and the new hospitals being built with these federal grants are hastening the moment when in every province it will be possible to consider further action towards hospital and medical care insurance—for which, of course, the federal government stands ready to provide assistance, under satisfactory agreements for dominion-provincial co-operation.' Then, I associated that with a statement made by the Prime Minister in a radio address in which he said:

"'It is up to the people and the government in each province to take the initiative in working out health insurance plans in line with their local conditions and their traditions.'

"Anyone who has had anything to do with provincial administration or with federal administration would recognize that that statement was a most important one, particularly in the light of the present character of dominion-provincial

relations in this country."

It will be noted that representatives for all three political parties evidently expressed the attitude of their respective parties in the above statements.

Prince Edward Island Increases Fee:—The following motion was passed at the Annual Meeting of the Dental Association of Prince Edward Island held on June 30, 1950:

"That our contribution to the Canadian Dental Association for the year 1950 be at the rate of ten dollars per member now paying annual dues. That for the year 1951 the rate will be increased to fifteen dollars per member."

By-laws for Hygienists — Saskatchewan:—The College of Dental Surgeons of Saskatchewan becomes the first province in Canada to put in force by-laws for dental hygienists.

By-laws with respect to Dental Hygienists, passed by the College of Dental Surgeons of Saskatchewan pursuant to the Dental Act:

1. Registered Dental Hygienists of Saskatchewan shall be those persons who have been granted, and shall be entitled to enjoy, an unrevoked license to practise Dental Hygiene.

2. Any person who has fulfilled the requirements of the University of Saskatchewan, and has been passed by the University Examining Board, and has complied with the requirements of these By-Laws relating to registration may be granted a Diploma of registration.

3. An Applicant for registration as a registered Dental Hygienist, shall make application in the form prescribed by the College of Dental Surgeons of Saskatchewan, and shall pay to the College of Dental Surgeons of Saskatchewan a registration fee of \$25.00.

4. (1) A Diploma of qualification to practise dental hygiene shall be issued to each successful applicant for registration, and such diploma shall be signed by the President and Registrar-Sec'y, and shall be supplemented by an Annual Certificate of license on payment of the annual license fee. (2) An index or register of all certificates issued and outstanding from time to time shall be maintained by the Registrar-Sec'y.

5. (1) Every registrant engaged in the practice of dental hygiene in Saskatchewan, shall pay to the Registrar-Sec'y,

an annual license fee of \$5.00 on or before the 15th day of January in each year, or any portion thereof.

(2) The license of any registrant who shall not have paid such annual fee by the 15th day of February in any year, shall lapse, and thereupon all rights and privileges of the registrant to practise as a dental hygienist shall forthwith cease. (3) Notwithstanding the provisions of sub-section 2 of this section, the registrant shall be entitled to restoration of her license on payment of her annual license fee and an additional penalty fee of \$5.00.

6. A Dental Hygienist shall be privileged to perform the following services, (a) Removal of stains and calcareous deposits from exposed surfaces of teeth, including the gingival crevice.

(b) Teaching of oral hygiene.

(c) Administration of first aid.

(d) Administration of palliative treatment.

(e) Taking of radiograms.

(f) Providing the usual general services of a dental nurse.

(g) Any measures of a specific nature determined by the Council.

7. No dental hygienist shall do any act or provide, perform, undertake or attempt any diagnosis, work service, operation, demonstration, instruction, assistance or advice, which is part of the practice of Dentistry, or any branch thereof, except the performance or rendering of the services delineated in Sec. 6 above.

8. No dental hygienist shall commence or continue to be employed by or associated with a dentist at any time when any other dental hygienist is employed by such dentist.

9. A dental hygienist may undertake under the direct supervision of a dentist those tasks which may be determined from time to time by the Council in regular session, to be part of the practice of a registered dental hygienist.

10. Every dental hygienist employed by or associated with a member of the College of Dental Surgeons of Saskatchewan, shall display her diploma of qualifications and her annual license certificate in a conspicuous place in her office.

11. No dental hygienist shall contact any patient or intended patient except in the name, on behalf or and with the consent of the dentist with whom she is employed, or is an associate.

12. The College of Dental Surgeons of Saskatchewan shall be entitled to refuse to issue a license of, or may revoke, can-

cel or suspend any license issued to any dental hygienist who has been found by the College of Dental Surgeons of Saskatchewan to be guilty of incompetence or improper, unprofessional or dishonourable conduct in her relationship to the dental practice where she is employed, or guilty of a breach of the provisions of these By-Laws or of conduct in contravention of the provisions of the Dental Act, or who shall have been convicted of an indictable offence.

13. The Discipline Committee, as constituted from time to time, pursuant to the provisions of the Dental Professional Act, shall have full power and authority to enquire into and ascertain the facts of each case which may become the subject of enquiry, pursuant to the provisions of the Dental Profession Act.

14. These By-Laws shall come into force.

(These By-Laws were declared in force on April 1st, 1950.)

Pre-Professional Education in Dentistry:—Over a period of several years the Council on Dental Education of the C.D.A. has given study to the subject of pre-professional education. As a result of this study the Council commissioned the late Dr. Thomas Cowling to write a report upon the subject. This report has now been published in booklet form (69 pages). Distribution of this publication has been made to educational institutions and individuals in the field of education. A considerable number of commendatory letters have been received.

Dr. Scott Hamilton, Chairman of the Council on Dental Education, states in the foreword:

"While the report is not to be considered final in its recommendations, it is felt that many of the suggestions have merit and deserve serious consideration. It is hoped that its publication will serve the dual purpose of furnishing further light upon a controversial subject, and contribute something toward the establishment of a satisfactory standard of academic requirement for undergraduates entering the professional course of instruction." Single copies of this publication will be mailed upon request.

World Health Assembly Initiates Study on Dental Health:—"The Third World Health Assembly, at its meeting on May 25, adopted a resolution calling for organization of a program to deal with the problem of dental health. The resolution reads as follows:

"Whereas dental diseases are universal

and affect adversely the health and efficiency of millions of individuals throughout the world;

Whereas a study of these conditions on a world-wide basis may contribute to a better understanding of factors such as malnutrition underlying dental diseases; and

Whereas the application of known preventive and corrective measures designed to prevent, correct, or eliminate dental diseases appears eminently desirable;

The Third World Health Assembly

1. REQUESTS the Executive Board and the Director-General to study the problem of dental health with a view to presenting a program in this field for consideration by the Fourth World Health Assembly, and

2. CALLS on all research institutes concerned with the problem of dental health to collaborate with WHO in the study of this problem."

First District Dental Society in New York City Announces Voluntary Dental Insurance Program:—"The first voluntary pre-payment dental insurance plan in the United States to be sponsored by a dental society was launched this week in New York City. The plan, called Group Health Dental Insurance, Inc., was approved by members of the First District Dental Society of the State of New York, following its endorsement by the board of directors after a two-year study. Announcement of the society's approval was made by Dr. Oscar Jacobson, society president, and Dr. Bissell B. Palmer, secretary and administrative officer of the insurance plan. They said the program was designed primarily to meet the cost of adequate dental care for families with incomes of less than \$5,000. Initially the program in its present form will be limited to 25,000 subscribers for a two-year period. Membership will be based on group enrolments with subscribers required to be members of an employed group of at least 60 persons of whom at least 75 per cent enrol. Dependents—wives or husbands and children from two to 18—are also included. Premiums are expected to be \$19.80 a year for a single person; \$39.60 for a family of two, and \$72 for a family of three or more. The benefits will cover all treatment for families with incomes of less than \$5,000. If the income exceeds that, Group Health Dental Insurance will pay an indemnity toward the cost of the services. The plan will operate in two stages. The first calls for the correction of existing dental defects to be paid for by the subscriber up to \$150 at a moderate scale of fees. The plan will pay for costs in excess of \$150. With accumu-

lated defects of the past corrected, the second stage, that of maintenance, will go into operation and Group Health Dental Insurance will meet the costs of all the dental services for those in the

\$5,000-or-less income bracket. The patients will have a free choice of any participating dentist and treatment will be given in the offices of the dentist."

NEWS FROM THE PROVINCES

PRINCE EDWARD ISLAND

The **Dental Association of Prince Edward Island** held its annual meeting on June 30 when the following officers were elected: President—Dr. A. W. Allen, Charlottetown; Vice-President—Dr. T. Wayne, Charlottetown; Sec.-Registrar-Treas.—Dr. Heath MacIntyre, Charlottetown. Members of the Council, Drs. H. E. Clarke, Summerside, and J. C. Gallant, Charlottetown.

It was stated at the meeting that a Director of Dental Services had been appointed through the Dept. of Health and Welfare, and that duties would be assumed about August 15.—P.E.I. *Journal*.

ALBERTA

A **refresher course** will be held at the University of Alberta Dental Department on September 18-19. This course will be of particular interest to the general practitioner, and will consist of essays assisted by moving pictures and slides.

The undermentioned subjects will be presented only once, and at the end of each presentation a question period will be allowed.

1. Interpretation of Dental X-Rays—by Dr. John Clay.
2. Preventive Orthodontics—by Dr. R. R. McIntyre.
3. Full Denture Work—by Dr. Sperry Fraser.
4. Periodontology—by Dr. J. Neilson.
5. Oral Diagnosis—by Dr. H. R. McLean.
6. Neuralgic Disturbances—by Dr. H. H. Hepburn, MD, CM.

Dr. L. F. Fosdick, Ph.D., Prof. of Chemistry, Northwestern University Dental School, Chicago, authority on Dental Caries, will present papers on both days.

Any enquiry with respect to the above may be addressed to Dr. W. A. Quigley, Faculty of Dentistry, University of Alberta.

On July 27 the **Edmonton and District Dental Society** held a Golf Meet at the Highlands Golf Club in Edmonton. There were 38 members present including Dr. G. D. McIver from Camrose, and Dr. Nikiforuk of Vegreville. It was

pleasing to see quite a number of recent graduates present.

Dinner was served at the Club House at 7:00 p.m., after which prizes, the numbers of which were drawn from a hat, were given to several of the contestants. These prizes consisted of golf balls, and Dr. Bob Blaquiére being the father of a new baby boy was also presented with a new ball. The low score winner was Dr. T. Nikiforuk, but due to the fact that he has won this so many times the prize was given to the next best, which was Mr. Earl Pinch, representative of the Ash Temple in Edmonton.

The high score of the day was won by Dr. G. D. McIver, of Camrose.

After the prizes were given out, Col. W. Hancock, late of the R.C.M.P. in Edmonton, was supposed to speak on "Ducks Unlimited." Although the Colonel did give a short address on this subject he spent a considerable amount of time telling, in his own inimitable manner, of a trip he took to England and Paris lately, telling particularly of the "off the beaten track spots," which surprisingly enough were known of by many present.

Due to the fact that so many of our promising dentists in Edmonton are building magnificent homes in a subdivision known as Windsor Park, steps are being taken to have the name of this subdivision changed to "**Tooth Acres.**"

W.E.A.

ONTARIO

The new **Executive Officers of the Ontario Dental Association** for 1950-51 are: President, Dr. D. L. McKerracher, Arnprior; Past President, Dr. L. M. Grose, Toronto; President-Elect, Dr. W. K. Prendergast, Toronto; Historian, Dr. G. V. Morton, Toronto; Secretary-Treasurer, Miss Dorothy Jutton; Councillors, Dr's: W. D. Clark, Hamilton; H. R. Skilling, Toronto; R. G. Woods, Watford; J. A. Boyd, Kitchener; J. H. Johnson, Toronto and L. R. Braden, Ottawa.

The **Seventh Annual Meeting of the Laboratories Association of Ontario** was held on May 13-14 at the Royal York Hotel, Toronto, and was in every respect the most successful in the history of the organization.

On Friday evening, a "get-acquainted" reception was held, and a hearty welcome was extended to all who arrived early for the Convention.

Registration was in charge of Mr. James Price and Mr. Stan Hosken.

Commencing at 9.15 a.m., under the chairmanship of Mr. H. G. Tebbutt, table demonstrations were presented by the following: Mr. W. L. Walker, "Bite Blocks and Their Relation to Condyle Movements"; Mr. P. W. Dykes, "The Advantage of Heat Treating of Golds"; Mr. Chas. Dunlop of Detroit, Michigan, "The Laboratory Steps of Hydro-Colloid Technique for Inlays and Fixed Bridges."

At 10.30 a.m., under the chairmanship of Mr. Al Smith, Mr. T. E. Moore of Toledo, Ohio, Research Director of Ransom and Randolph Company presented an "Illustrated Lecture on Dental Gypsums, Their Uses and Application in the Dental Laboratory Field."

At 11.30 a.m., under the chairmanship of Mr. H. Elliott, there was a demonstration "Partial Denture Construction," by Mr. Roy Wain of the J. M. Ney Company, of Hartford, Conn. He used colour films to show the various steps in waxing, casting and finishing of a gold partial.

In the afternoon under the chairmanship of Mr. H. G. Tebbutt, Mr. J. E. Brassie, of the Dentists' Supply Co. of New York City, described the "Trubyte Simplex Technique."

On Saturday evening 135 members with their ladies and guests assembled at the Roof Gardens for a Reception and Banquet, presided over by the president, Mr. Wm. Taylor. In his opening remarks he thanked the executive of the association for their able support in preparing the banquet and the Convention program, then he turned over the introduction of guests to Mr. Wm. Walker, who introduced the following: Dean Ellis, who extended the best wishes of the dental profession for the success of the convention; Dr. Mason, Dean Emeritus, who congratulated the technicians on the growth of their association; Mr. C. McKenna, representing the Supply Houses, who extended greetings. Mr. E. Bully ably responded to the introduction of guests and visitors from Quebec and U.S.A. by bringing greetings from the Quebec Dental Laboratories Association and expressing thanks for the courtesy and hospitality shown to visitors. Mr. E. Pow proposed a toast to the wives of the members to which Mrs. Taylor, wife of the President, replied, thanking Mr. Pow for the very kind references about the ladies. She then extended her welcome to the ladies present, inviting them to afternoon Tea on Sunday, between the hours of two and four. Mr. Taylor introduced the Guest Speaker of the evening, Dr. Robt. E. Moyers, D.D.S.,

M.S., Ph.D., member of staff at the Faculty of Dentistry, University of Toronto. Dr. Moyers spoke on his experiences with the "Resistance Movement" in Greece during World War II, mentioning an often used phrase of the Greeks, "Freedom is Wonderful"—a phrase we should all remember. Dr. Moyers' talk was received with great acclaim, and he was ably thanked by the President.

After the banquet, dancing was enjoyed by all, bringing to a close the festival part of our convention.

The following day a Business Meeting and Election of Officers for the 1950-51 season was held. Chairman of the Governing Board of Dental Technicians, Mr. C. E. Spence, gave a complete report on the activities of the Board during the past year, assisted by Mr. G. McDonald, solicitor for the Board. Following this a buffet luncheon was served in the Tudor Room.

In the afternoon under the chairmanship of Mr. Ken Daly, Mr. Duncan Marshall gave a lecture on the subject "Laboratory Economics Gathering Statistical and Cross-Section Data in the Conducting of a Dental Laboratory." Mr. Marshall operates a successful and efficient laboratory in Detroit, Michigan, and fully understands this aspect of an efficiently run business.

The closing lecture of the meeting was an address by Dr. Victor L. Steffel of the College of Dentistry, Ohio State University. His subject was "Clasp Removable Partial Denture Design." Dr. Steffel gave a splendid presentation.

Thus ended an excellent Convention of this Association.

The following officers were elected for the 1950-51 season:

President, Wm. Taylor, Oshawa; Vice-President, Geoff. Tebbutt, Toronto; Secretary, K. M. Daly, Toronto; Treasurer, J. R. Price, Toronto. Board, Bus Brown, Toronto; Chas. L. Daly, Toronto; Chas. Goodall, Toronto; L. V. Gosso, London; S. Hosken, Hamilton; C. K. Mellish, Toronto; D. A. Parent, Windsor; H. H. Posen, Toronto; D. Rollaston, Toronto; W. Roy, Sudbury; A. E. Smith, Simcoe; Chas. E. Spence, Toronto; D. Taylor, Kingston; Bill Walker, Toronto; B. S. Sweet, Toronto; D. R. Paver, Timmins.

K. M. Daly, Secy.

ERRATUM

In connection with the prize list and awards to the recent graduating class in Dentistry, University of Toronto, reported in June, Dr. A. J. Harris won the "Mary Adele Daly Memorial Scholarship." Regret an error occurred in the name of the prize.

BRITISH COMMONWEALTH NEWS

GREAT BRITAIN

The **Fifth Report of the Nuffield Foundation** for the year ending March 31, 1950, records the extension of the Foundation's activities into new and promising fields as well as the continuation of projects already commenced. An innovation is that grants may now be made in support of research to Dominion universities and similar institutions within the British Commonwealth. Fellowships and scholarships including those in dentistry continue as before or with slight modifications and fellowships are now offered to the new Dominions of India, Pakistan and Ceylon. Six new dental fellowships and one dental scholarship are recorded. —Br. D. Jour.

School Dental Service:—The serious position of the school dental service was discussed at the annual conference of the Association of Education Committees held at Scarborough on June 23. A resolution was carried expressing alarm at the rapid disintegration of the school dental service, and calling on the Minister of Education to take urgent steps, in collaboration with the Minister of Health, to restore the school dental service at least to the state of effectiveness it had attained before the passing of the National Health Service Act.

Speaking in the debate Mr. Stanley Hirst said "Rightly or wrongly, local authorities have taken the line that they are not prepared to compete with the salaries available to dentists in private practice under the National Health Service."—Dr. D. Jour.

AUSTRALIA

Standards for Dental Materials:—The Standards Association of Australia has issued the following Australian Standards for dental materials:

- T. 1—1949 Dental Mercury.
- T. 2—1949. Dental Amalgam Alloy.
- T. 3—1949. Zinc Phosphate Cement for Dental Purposes.

These specifications are the first three of a series of Australian standard specifications for dental materials, the preparation of which has been undertaken at the individual requests of the Commonwealth Department of Health and the Australian Dental Association. They prescribe composition or performance requirements and methods of test. The Australian Dental Association will use these specifications in their proposed scheme for certifying the quality of dental materials, from both local and overseas sources, marketed in Australia.—Aus. J. of Dentistry.

NEW ZEALAND

The dental nurse plan in New Zealand, operated by the government since 1921, has had a deplorable effect on the practice and development of children's dentistry in that nation, Dr. Allen O. Gruebbel, of Chicago, declared in a report released by the American Dental Association.

Dr. Gruebbel, secretary of the Association's Council on Dental Health, spent two months in New Zealand earlier this year surveying the system under which 85 per cent of New Zealand's 320,000 children, from 3 to 13, receive nearly all dental care from government-salaried dental nurses. The nurses, after limited training, fill, extract and clean teeth of children.

Dr. Gruebbel was sent to New Zealand by the American Dental Association to evaluate the dental nurse plan after proposals were advanced for the establishment of a similar plan in the United States.

Dr. Gruebbel said he found that the prevalence of dental disease, particularly dental decay, is as high or higher in New Zealand at present than in any other country for which data have been reported and is "at least twice as high as in most areas in the United States."

The dental nurse system, as operated in New Zealand, he reported, has had "a deleterious effect on the scientific development of pedodontics (dentistry for children)."

"Dentistry for children, which many authorities believe to be the most important part of dental practice," he said, "is almost completely neglected by the dental profession in New Zealand, and until three years ago was not taught in the dental school."

This, he explained, resulted from the fact that under the scheme, dental care for children has been "relegated almost entirely to partly trained auxiliary personnel."

Dr. Gruebbel was sharply critical of the two-year training course provided dental nurses by the New Zealand government.

"Although the dental nurse is expected to provide a scientific health service, a considerable portion of which is of a surgical nature, she is given no scientific training, she is not encouraged to read scientific books or publications and she is not given an opportunity for continuing her dental education," he said.

The A.D.A. representative said he had found that scientific aspects of dental services were "deliberately excluded from the course of instruction in order

that dental nurses will not develop a professional attitude."

Also contributing in large measure to the poor type of dental health service being provided children is the almost complete lack of technical supervision of the work of the dental nurse, Dr. Gruebbel said, pointing out that he found that dental officers often did not inspect the work of the nurses more frequently than once in six months.

He said that a child was supposed to be referred to a dentist if the dental nurse believed he required treatment beyond her scope, but added that "this practice is more often the exception than the rule." He continued:

"Young children need such expert services as surgical treatment of the pulp, preventive and corrective orthodontic care and preventive and corrective treatment for abnormal growth and development—services which few children in New Zealand now receive."

Inadequate and outdated equipment was also noted by Dr. Gruebbel. He said that satisfactory examinations and diagnoses were made impossible by the almost complete lack of x-ray equipment. He also found the use of questionable types of filling materials and equipment "symbolic of an era which modern dentistry has relegated to the past."

Dr. Gruebbel said that the government sponsorship of the scheme had given New Zealand parents a false sense of security regarding the dental health of their children, adding:

"The public cannot be expected to know dentistry's role in a complete health service so long as dental treatment for children is limited largely to filling, extracting and cleaning teeth."

Dr. Gruebbel also deplored the lack of research and measures designed to prevent dental disease.

"The approach has been to develop a large scale reparative service. No attempt of any consequence was made to reduce the size of the problem through research and prevention. The high incidence of dental disease and the high cost of the reparative service will remain unchanged until more emphasis is placed on research and prevention," he said.

Pointing out that the dental nurse plan has served as the basis for the development of a large scale system of state dentistry in New Zealand, Dr. Gruebbel reported that a large number of dentists believe "that dental care controlled by the state eventually will lead to a serious deterioration of the quality of dental care as is now taking place in the field of medicine in New Zealand."

GENERAL NEWS

Medical-Dental Relations in Rhode Island—Last year a special Medical-Dental Relations committee was appointed in this State for the purpose of improving medical-dental relations for the benefit of all patients, believing that a patient should be treated as a "whole man". The Extension Course lectures given last year were exceptionally well attended.

This year a course of four lectures in the field of oral and dental medicine is planned. The subjects are: "Recent Advances in Antibiotic Therapy of Importance to Physicians and Dentists"; "Neurophysiology, Diagnosis and Treatment of Pain in the Face, Mouth, and Adjacent Regions"; "Common Interests in Pediatric Psychology for the Physician and Dentist"; "The Diagnostic Importance of the Tongue and Oral Mucosa".

The Negro in Dentistry Theme of New Book—Final plans are underway for the publication of a book on the contributions of the Negro to American dentistry. The volume, under the editorship of Clifton O. Dummett, has been in preparation for many months and will soon be available for distribution.

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Although National Compulsory Health Insurance is a dead issue for this session of the U.S.A. Congress, all indications are that it won't stay dead for long. A new pamphlet entitled, "Better Medical Care Than You Can Afford" has been put out by the Democratic National Committee to promote the Truman Health Plan. It is a sharp, effective piece of propaganda that oversimplifies the issues and runs through the whole complicated subject of national health insurance in about five minutes' reading time. It will be used to great advantage by labour unions in the coming campaigns because of its mass appeal.—F. Rev. of Chic. D. Soc.

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State Organizations Unite for Political Action—The Illinois State Dental Society, through its Committee on Federal Health Legislation, in cooperation with similar committees of the Illinois State Medical Society and the Illinois Pharmaceutical Association, presented a program on "Compulsory Health Insurance; What You Can Do to Combat It" on Sunday, July 9, in Springfield.

Canadian Dental Nurses' and Assistants' Association: This Association held its annual meeting in May in Toronto and proved very successful. Under the inspirational leadership of Mrs. Marion Edwards this Association has made rapid progress and promises to be a vital factor in the practice of Dentistry in Canada.

The following provinces were represented: Nova Scotia, Quebec, Ontario, Manitoba, Saskatchewan and Alberta. It was reported that there were 364 active members last year and that there was \$1,036.73 in the treasury.

Some of the plans being developed are incorporation, the publishing of a bulletin, and arrangements for a course of lectures by dentists in various centres, followed by examination and certification.

The following officers were elected for the ensuing year: President—Mrs. Marion Edwards, York Mills, Ontario; First Vice-President—Miss Margaret Good, Montreal, Quebec; Second Vice-President—Miss Grace Lambert, Vancouver, B.C.; Sec.-Treasurer—Miss Ernie Derrick, Montreal, Quebec; Membership Convener for the West—Miss Florence Worobec, Moosomin, Sask.; Membership Convener for the East—Miss Florence Limoges, Montreal, Quebec.

I am sure that we wish for this association every possible success, and that we dentists will do what we can to assist in any way possible. M.H.G.

A statement approved by the **American Council on Rheumatic Fever of the American Heart Association** recommends specific dosage for the administration of penicillin before dental extractions in rheumatic individuals or patients with congenital heart or blood vessel defects to prevent the possible development of subacute bacterial endocarditis. The following procedure is recommended:

1. Except in emergencies operative procedures in rheumatic individuals should be deferred until there is no clinical evidence of rheumatic activity and laboratory tests indicate that the rheumatic process is subsiding.
2. Patients should be free from upper respiratory infection.

The fluoridation of public water supplies as a partial protection against tooth decay was described editorially in August by *The Journal of the American Dental Association* as "a tremendous step forward in the profession's fight against dental disease."

Fluoridation is the process of adding

small amounts of fluorine salts in the proportion of 1 to 1.5 parts per million to the central water systems of cities and towns.

The editorial, however, sounded a note of caution against viewing fluoridation as a panacea.

"The artificial fluoridation of drinking water . . . is not a cure-all," it said. "It will not protect children completely from dental decay."

The addition of fluorides to domestic water supplies has now been recommended as a decay-control measure by the U.S. Public Health Service and the American Water Works Association for communities "subject to the approval of the state and local health authorities and the dental and medical professions."

Large scale control tests have been carried on within the past five years in a number of cities. Preliminary reports reveal that children drinking water containing small amounts of artificially-added fluorine had substantially less tooth decay than did those drinking fluoride-free waters.

Among cities with control tests are Grand Rapids, Mich., Newburgh, N.Y., Brantford, Ontario and Sheboygan, Wis. Tests have also been started at Evanston, Ill., Ottawa, Kans., Midland, Mich., and a number of Wisconsin communities.

"In fact," the *Journal* stated, "the reports warrant the assumption that the fluoridation of drinking water may, at the end of ten years, reduce significantly the incidence of caries (decay)."

Report of Fluorine Study Committee of Wisconsin—Enumeration of the work that has been accomplished might be as follows:

(1) Definite proof that artificially fluoridated water will accomplish the same purpose as where the fluorine is found in the water supply.

(2) That the health of the community is not impaired by the presence of fluorine, but rather in many instances is better than where fluorine does not exist.

(3) That it is possible to fluoridate the human tooth by the constant use of one part per million in the drinking water, as proven by Doctor Frisch.

(4) That there is no longer necessity to wait for more positive proof.

(5) That it is approaching the time when people of authority refusing to fluoridate drinking water will be held accountable for a great deal of the dental caries that will follow.

(6) That irritation resulting from decayed and rough teeth, which eventually results in cancer, may have been avoided if that patient's teeth had been fluoridated and caries prevented.

(7) It is fast becoming a public health requirement.

Sheboygan now has children who were born and raised on fluorine water, an analysis of which show that 72% are free from any form of dental caries. That is somewhat higher than the experience of the same age group in Green Bay where the fluorine is found in the natural state.

Wisconsin now has twenty-six cities drinking fluoridated water, and forty-two preparing to utilize it.—*Journal of Wisconsin State D. Jour.*, July, 1950.

Atomic energy research may lead to the development of new weapons for the control of tooth decay, civilized man's most common disease, two Los Alamos, N. Mex., dental scientists reported recently.

Writing in *The Journal of the American Dental Association*, Dr. William Ward Wainwright and Dr. Frank A. Lemoine described as new technique in which radioactive isotopes were used to measure the permeability of tooth enamel.

The new technique, they reported, will enable dental scientists for the first time to determine the rate and depth of penetration of various substances into the enamel of teeth.

"Some of these may have the power to inhibit whereas others may enhance caries (decay) activities," they said.

They added that "radioactive tracers add vast possibilities for extension of knowledge of enamel function and the process of dental caries control."

The radioactive urea, in water, was spread over the crown surface of 14 human teeth 10 minutes after they were extracted. The degree of penetration was indicated by highly sensitive radioauto-

graphs able to record extremely small quantities of the radioactive substance on a special x-ray film.

The scientists found that penetration of the enamel took place rapidly, possibly within 10 minutes. In some of the teeth, the radioactive material, after spreading through the enamel, diffused through the underlying calcified dentine and then entered the pulp of the tooth.

The dental scientists pointed out that penetration of tooth enamel up to now has been tested with dyes that were used to detect penetration only of cracks and crevices in the enamel. They suggested that the action of the dyes was limited by their large molecules. The dyes also required 10 to 13 days for action.

Chicago Dental Society Announces Its Tenth Annual Prize Essay Competition

Author of Best Essay in this National Competition will receive cash award of \$500.00. The Chicago Society again offers a \$500.00 award for the best essay submitted in its annual essay contest.

The author of the prize-winning essay will be invited to present it at the 1951 Midwinter Meeting of the Chicago Dental Society next February.

To be able to participate in the prize essay competition, it is necessary that the contestant be a member of the American Dental Association or affiliated with a recognized dental institution. The rules are simple and fair and all contestants have an equal opportunity to win.

Application forms may be secured by writing to the Chicago Dental Society, 30 North Michigan Avenue, Chicago 2, Illinois. They must be filed with the Society before October 2, 1950.

IN MEMORIAM

Ewart Louis Brereton of Barrie, Ont., aged 74, died on July 5.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1897. He began to practise in Schomberg, Ontario, but in 1900 he moved to Barrie, Ontario. He was a member of Barrie School Board from 1915 to 1930 and of the Library Board during the years 1939-40.

Dr. Brereton became an honorary life member of the Royal College of Dental Surgeons of Ontario in 1947.

He is survived by his widow and one daughter.

George Frederick Wright of Trenton, Ontario, died April 30. He was graduated from the R.C.D.S. in 1891 and was in continuous practice for fifty years. He was a Mason and a life member of the United Church.

Dr. Wright is survived by his widow, one daughter, Mrs. D. G. Mounter of Hagersville, and three sons, Dr. C. E. Wright of Toronto, Dr. H. V. Wright of Trenton, and Dr. G. F. Wright, Jr., of Kingston, Ontario.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

SEPTEMBRE, 1950

No 9

Que faites-vous pour vos jeunes patients?*

par GUY BENOIT, D.D.S., M.S.D., Montréal

Je veux remercier le docteur V. A. Dubé, qui a bien voulu me fournir l'occasion, ce soir, de venir vous parler d'un sujet, qui, chaque jour, prend de plus en plus d'importance. Sujet qui effraie certains dentistes, qui peut faire perdre le nord en quelques minutes à d'autres. Croyez-le ou non, pour certains confrères, la vue d'un enfant leur fait peur. Le fait de les voir les fait frissonner et sans s'en apercevoir, ils ont déjà perdu leur capacité d'agir. En somme, ils ne sont plus que des hommes et le dentiste est absent.

Vous comme moi et tous nos confrères, d'un océan à l'autre, avons des obligations vis-à-vis la société et par notre profession nous avons été désignés et délégués pour préserver la santé et l'intégrité fonctionnelle de la structure de la bouche.

Par certaines lois fédérales ou provinciales, il a été accordé à notre profession certains privilèges, certains droits et, pour ces raisons, le praticien dans une certaine mesure est responsable vis-à-vis le public.

Mais comment la profession dentaire a-t-elle conservé cette confiance, qui lui a été donnée, et comment a-t-elle maintenu ses responsabilités en regard de la dentisterie pour enfants?

Vous admettez comme moi que la majorité des enfants ne reçoivent pas les avantages que la dentisterie moderne leur offre aujourd'hui. Ces soins dentaires, que nous pouvons leur procurer, n'ont pas

reçu toute l'attention qu'ils méritent et dans beaucoup de bureaux, l'importance qu'on y attache est à peu près nulle. Les perturbations présentes dans la bouche de ces enfants seront peut-être des infirmités dentaires à l'âge adulte; ce manque d'attention en face de ces défauts, négligence du dentiste ou des parents, occasionne souvent des désastres irrémédiables.

Collectivement ou individuellement, la profession dentaire doit accepter sa part de responsabilités pour la négligence apportée vis-à-vis la dentisterie des enfants et le peu d'intérêt manifesté dans le passé dans ce domaine.

L'indifférence de la part des parents peut être due à l'ignorance, mais le dentiste bien entraîné n'a pas d'excuses pour négliger les soins à donner à l'enfant.

Il n'est pas suffisant pour le dentiste d'être bien entraîné sur les aspects techniques de la pédodontie. Il devra également être très familier et renseigné sur les méthodes de prévention et également sur la psychologie infantile et ses applications.

À la suite de congrès et de conférences sur la pédodontie, on discute sur le besoin urgent de former des spécialistes et d'entreprendre des recherches dans ce domaine. On reconnaît aussi que les soins, qui doivent être donnés aux enfants, sont du ressort, en premier lieu, du dentiste en pratique générale.

Ce n'est que depuis quelques années

*Résumé d'une conférence prononcée le 16 mai 1950, devant la Société Dentaire de Montréal.

que les enfants ont reçu, au point de vue dentaire, une attention plus spéciale et que la pédodontie a été acceptée comme spécialité par la profession dentaire.

En traitant les enfants d'âge pré-scolaire et scolaire, le dentiste évitera aux parents le coût de soins plus dispendieux; également la société y gagnera par la diminution des maladies engendrées à la suite des infections dentaires.

Notre profession a été accusée depuis longtemps de son étroitesse de vue et cela à cause de son attitude vis-à-vis la pédodontie. Trop d'importance a été donnée à la chirurgie et à la prothèse, si bien que l'enfant a été négligé. Aussi, et il faut l'avouer, on a pensé à intérêt professionnel de notre travail plutôt qu'au but réel de notre profession. Heureusement, aujourd'hui, la profession s'est aperçue de l'importance et de la nécessité de traiter ces enfants. La besogne à faire dans ce domaine est considérable. Mais ici il faut louer les efforts des différentes sociétés dentaires et aussi il faut mentionner le travail remarquable de la Ligue d'Hygiène Dentaire de la Province.

Le succès, que vous avez aujourd'hui dans vos bureaux, est dû peut-être à cette sollicitude, dont vous avez entouré les enfants, et, à votre insu, vous vous êtes recruté une clientèle grâce à eux.

Lorsque nous regardons le problème de la dentisterie pour enfants, il faut considérer deux choses, qui sont les buts ultimes de la dentisterie:

- 1o la prévention de la perte des dents;
- 2o la prévention de maux de dent. Et comme les dents temporaires sont appelées à disparaître à une période choisie par la nature, on doit ajouter un troisième but à la dentisterie des enfants, qui sera de guider le développement de la denture permanente.

Mais ici, je voudrais revoir certains principes psychologiques applicables à la dentisterie infantile.

Comme vous le savez, les enfants sont des personnalités plastiques. Leurs actions sont absolument contrôlées par l'instinct et leurs désirs, et font d'eux des sujets très difficiles à raisonner. Lorsque vous êtes en présence d'un enfant, l'élément

fondamental de succès repose sur la sûreté de vous-même. Il est surprenant combien un enfant peut différencier une personne, qui a confiance en soi, de celle qui ne l'a pas. Dès qu'un enfant s'aperçoit de votre hésitation, il sera pour vous un mauvais patient. Dès le premier contact, vous devez être maître de la situation. Sans cela l'enfant prendra avantage sur vous; c'est alors que vous devrez reprendre aussitôt la situation en main par des remarques fermes. Car avant tout, le succès opératoire repose sur le contrôle de l'enfant.

Par contre, une attitude autoritaire ne peut être employée longtemps, car l'enfant d'aujourd'hui est un individu qui a confiance en lui et il est plus facile d'éveiller son intérêt par l'abord approprié. Il adoptera une attitude agressive, s'il est entraîné dans une situation où il ne reçoit pas le respect qu'il mérite. L'enfant avant tout veut être traité comme un adulte.

Pour comprendre tout jeune patient, il est nécessaire de le considérer comme un tout. Lorsque vous recevez vos jeunes patients, vous ne devez pas vous occuper uniquement de leurs dents, mais songer qu'ils ont des sentiments, et un tempérament particulier, qui réagit de telle ou telle manière. Le jeune patient s'en vient souvent au bureau avec un état d'esprit, que vous devez déceler aux premiers abords. Ceux qui réussiront le mieux à maîtriser ce jeune patient seront ceux qui appliqueront les règles les plus simples de bon sens plutôt que l'application rationnelle des principes psychologiques. L'application pratique de la psychologie infantile consiste à faire tout ce qu'on peut pour l'enfant à l'aide des circonstances favorables et de laisser la psychologie prendre soin d'elle-même; ou pour citer le docteur Kauffman dans un écrit du *Journal of Dentistry for Children*: "Love children and be yourself".

Un moyen, qui est à la portée de tous et que beaucoup ont négligé, est l'utilité du langage. Au point de vue éducatif, une grande partie de l'enseignement donné dans nos écoles, spécialement aux enfants d'âge pré-scolaire, leur vient de ce qu'ils voient et de ce qu'ils entendent.

L'item le plus important est le choix des mots adaptés à l'enfant. Ceux qui devraient être les plus prudents sont les parents. Les enfants remarqueront souvent la manière, dont les adultes réagissent au mot "douleur", et plus tard copieront la conduite des plus vieux. Un parent peut dire "je hais le dentiste" ou "je hais la fraise" et immédiatement l'enfant décide lui aussi de détester les mêmes choses. Et les récits exagérés des douleurs dentaires relatés par les parents, peuvent rendre plus tard les enfants craintifs, en pensant au dentiste, souvent avant même de l'avoir vu.

Le docteur McBride vous donne quelques suggestions. "Le contrôle approprié de la voix," dit-il, "quand quelqu'un parle à un enfant, est d'une extrême importance." Celui qui parle à l'enfant ne doit pas camoufler ses sentiments par le ton de sa voix. Un enfant reconnaît très vite le manque de sincérité ou la méchanceté dans la voix d'un adulte. Il est nécessaire de tenir une conversation à la portée de l'enfant. Le meilleur moyen d'y réussir est d'employer des phrases courtes et simples, tout en tenant une conversation sée et en évitant soi-même d'avoir une conversation de bébé.

Lamons recommande de questionner l'enfant sur les choses, qui l'intéressent, afin d'engager la conversation. Il est bien important de répondre aux questions de celui-ci et cela, d'une façon simple et sincère, car une réponse sincère peut faire beaucoup pour créer un sentiment de confiance de la part de l'enfant vis-à-vis son dentiste.

Durant votre conversation, soit avec l'enfant ou les parents, vous devez choisir vos paroles. C'est le cas de dire qu'avec vos jeunes patients il faut se tourner la langue sept fois. Tant que l'enfant ne vous aura pas donné confiance, il vous surveillera sur ce que vous dites et la moindre parole susceptible de créer un doute chez lui développera ce sentiment de crainte. Comme vous le savez, la crainte n'est pas un sentiment inné, mais plutôt le résultat de l'expérience. Et de cette expérience acquise dépendront les réactions de l'enfant.

La différence de compréhension qui

existe entre l'adulte et l'enfant n'est pas une différence de qualité, mais essentiellement de degré.

L'expérience limitée d'un enfant le portera à réagir d'une façon routinière plus fréquemment qu'un adulte vis-à-vis une situation. C'est pourquoi dès vous avez approché un jeune patient et qu'une manière d'agir a réussi, n'en cherchez pas d'autres. Il faut être simple. Une réussite avec une certaine manière ne veut pas dire que vous convaincrez votre prochain petit patient de la même façon. Ils sont tous jeunes, mais ne se ressemblent pas. Une chose que vous devrez éviter est de regarder votre patient du haut de votre grandeur, en l'écrasant de votre regard. C'est le meilleur moyen de vous faire détester et de vous faire prendre en aversion.

Une chose bien importante est de connaître le prénom de l'enfant, avant de l'avoir rencontré. L'enfant qui vient pour sa première visite et qui est interpellé par son prénom est fort surpris. "On me connaît," dit-il et, sans le vouloir, vous avez peut-être créé un lien d'amitié avec lui. La manière, dont vous recevez votre patient, le sourire, avec lequel vous engagez la conversation sur les choses qui l'intéressent, sont des procédés qui mettent votre patient à l'aise.

Parmi les différents types de patients, on peut en considérer six groupes:

1o L'enfant normal. Celui, qui répond d'une façon ordinaire aux approches, soit de l'assistante ou du dentiste. C'est l'enfant, qui ignore tout d'un bureau de dentiste, qui est élevé d'une façon calme et qui ignore la douleur.

2o L'enfant timide, qui a peur et qui doit être approché avec douceur et patience. Parfois c'est l'enfant qui a été touché par la douleur, soit chez le médecin ou le dentiste.

3o L'enfant tranquille et à la fois nerveux. C'est l'enfant, qui, sans manifester sa nervosité, a peur de l'inconnu. C'est l'enfant, qui a besoin d'être rassuré le plus tôt possible.

4o Le patient hystérique et gâté, qui doit être réprimandé, d'une façon franche et positive.

50 Le tapageur, l'insubordonné, pour qui vous devez vous imposer et démontrer votre autorité.

60 L'enfant qui est déficient mentalement, le type idiot. Dans ce cas-ci, le facteur important est de faire connaissance avec l'enfant.

Pour compléter cette division, on doit dire qu'un garçon doit être approché d'une toute autre façon qu'une fille, et qu'un enfant de 3 ans est manié différemment d'un enfant de 5 ans ou de 9 ans. Le problème de comprendre les enfants est un problème scientifique.

En tout premier lieu, il faut trouver les causes et ensuite essayer de les contrôler; ou, si on peut parler plus simplement, chaque enfant doit être traité individuellement.

Maintenant, revoyons ensemble certains traits que tout dentiste, qui traite des enfants, doit posséder:

10 Votre apparence devra être soignée;

20 Votre attitude et votre expression devront montrer de l'intérêt et de l'affection;

30 Vous devrez être courtois, ce qui est un art pour tout dentiste qui s'occupe des enfants;

40 Vous devrez être sincère, car la sincérité est la base des réactions psychologiques;

50 Vous devrez être diplomate, savoir ce que vous devez faire, sans faire de faute;

60 Savoir inspirer confiance, de l'admiration et du respect;

70 Votre caractère devra être aimable, d'une humeur égale. Car tout enfant voit ce qui est bon, et il est par nature accoutumé à la protection inspirée par l'amour.

Et pour terminer, résumons les points essentiels que vous devez observer avec les jeunes patients:

10 Les appeler par leur prénom;

20 Employer toujours des phrases courtes et simples;

30 Être toujours francs avec eux;

40 Répondre à leurs questions d'une manière sensée;

50 Eviter d'employer des mots désa-

gréables qui puissent leur inspirer de la crainte, tel que le mot "douleur" ou "ça fait mal";

60 N'employez jamais un langage de bébé lorsque vous leur parlez;

70 Parler d'une façon telle qu'ils comprennent;

80 Poser des questions pour engager la conversation avec l'enfant;

90 Ne jamais taquiner, critiquer ou crier après un enfant;

100 Le louer et l'encourager judicieusement;

110 Donner à l'enfant suffisamment de temps pour vous comprendre et vous répondre;

120 Avant tout, essayer de comprendre l'enfant et employer son langage et lui parler comme à un être intelligent.

Notre besoin, Messieurs, requiert beaucoup de souplesse et de subtilité. Nous devons être dans un état d'esprit tel que notre jeune patient, par la façon dont il est reçu, soit prêt à recevoir les traitements.

Et pour atteindre cette attitude mentale, il est nécessaire que vous soyez convaincus de l'importance de la dentisterie pour enfant. Vous devez connaître les méthodes les plus modernes de psychologie et d'éducation. Par votre position professionnelle vous êtes appelés à éduquer le public sur l'importance des dents temporaires.

Ayons conscience de l'immense service que nous rendons aux enfants. Sinon, nous oublions le premier principe de psychologie dans la pratique de la dentisterie des enfants et nous sommes voués à un échec dans notre travail.

En faisant tous un effort sincère pour comprendre les enfants nous pouvons faire beaucoup pour eux. Tout le monde aime voir un sourire et un bon mot. Les enfants, les premiers, apprécient la cordialité et la bonne humeur. Ils méritent la meilleure part de nos activités. Le temps est venu pour nous tous, qui marchons avec le progrès et l'essor que prend chaque jour notre profession, de rendre les meilleurs services dentaires à nos jeunes patients.

THE CHILD IN YOUR PRACTICE

What do you do for child patients? It seems that children do not receive adequate dental treatment. Child dentistry is not only the job of the paedodontist, but is also the business of every practitioner.

Too much attention is given to surgery and prosthetics and the child is neglected. Every child can be a good patient if you start on the right foot. You must know your patient first, and be sure of yourself.

First, you must gain the confidence of your patient, starting with a soft treatment like a prophylaxis or a pit or fissure cavity. The first visit is an acquainting one. Also, be interested in the story of your young patient and answer his questions. Tell him what you are going to do. Never try to fool him, be honest. Sincerity is the basis of psychological reactions. Be careful during your conversation with parents. Never use words like "pain" or "it hurts". As long as you have not the entire confi-

dence of the child, be careful of the choice of your words. When you speak with your young patient use words that he can understand. If you can, use a substitute like pipe for saliva ejector, or brush instead of drill. Encourage your patient when he is good.

What you should do with your young patient:

- 1) Call him by his first name;
- 2) Use short phrases;
- 3) Be honest with him;
- 4) Speak about the things he likes;
- 5) Your facial expression must show interest and pleasure.

What you must avoid:

- 1) Never tease a child.
- 2) Never use painful words.
- 3) Avoid baby talk.

Try to gain the confidence of the child, try to understand him. First, a child wants to be treated like an adult.

La carie dentaire; étiologie, mécanisme, prévention.*

par JEAN-PAUL LUSSIER, D.D.S., L.Sc.,
assistant-professeur au laboratoire de Physiologie des Facultés
de Médecine et de Chirurgie Dentaire, Université de Montréal.

(Suite et fin)

6.—Imprégnation au nitrate d'argent.

La technique de l'imprégnation du nitrate d'argent a été mise en pratique bien avant que l'on connaisse l'usage du fluor dans la prévention de la carie. L'action du nitrate d'argent sur la matière organique comme sur les constituants inorganiques de l'émail se traduirait par une augmentation de résistance à la solubilisation dans les acides et à l'action protéolytique des bactéries. Toutefois, tout est encore à confirmer dans cette voie. Gottlieb a aussi proposé une méthode d'imprégnation avec le chlorure de zinc et le ferrocyanure de zinc, dont les effets renforcent ceux du nitrate d'argent. Cependant Bibby (12) ne trouve aucune influence inhibitrice de ces agents sur la résistance de la dent à la protéolyse enzymatique, et Kniesner (37) met en doute l'efficacité du traitement autant que la validité des valeurs statistiques rapportées.

7.—Les détersifs.

On a reconnu aux détersifs, aux abaissurs de tension superficielle et autres

composés de même propriétés, un certain rôle dans l'inhibition de la carie. Ils peuvent, par leur présence dans les rinçoboues, nettoyer les espaces interdentaires dans plaques recluses et faciliter l'accès de la salive. Malheureusement, leur action est de courte durée et leur emploi n'est pas encore généralisé. On peut donc considérer ce moyen comme secondaire.

Walter et Carlson (56), dans une étude qui a porté sur une soixantaine de ces produits en fonction de leur efficacité contre les bactéries de la bouche et de leur toxicité de plusieurs d'entre eux, et les effets stimulants sur la croissance du *Lactobacille* qu'ils ont pu observer. Malgré les possibilités, qui nous sont offertes de ce côté, beaucoup d'essais restent à faire avant qu'on en vienne à des conclusions satisfaisantes.

Les méthodes que nous venons de citer ont pour principe l'inhibition bactérienne par voie chimique ou physique, ou l'augmentation de la résistance de l'émail par une amélioration de sa structure ou une

*La première partie de ce travail a été publiée dans la livraison du mois d'août 1950.

imperméabilisation de sa surface. Il existe d'autres moyens de prévenir la carie comme la restriction des sucres fermentescibles dans la diète et la pratique de l'hygiène buccale qui actuellement s'avèrent les plus efficaces, les plus économiques et les plus faciles d'accès au grand public.

8.—Restriction des sucres alimentaires

Rien n'existe de plus concluant dans les tentatives de réduction de la carie, que la diminution des sucres dans l'alimentation. Nous avons déjà rapporté que les sucres comme, le glucose et le saccharose, sont éminemment fermentescibles et que leur présence dans la bouche stimulait la production d'acides par les enzymes bactériens.

Becks (5) (10) et ses collaborateurs ont éloquemment mis en évidence la relation qui existe entre l'index du *L. Acidophilus* et la carie généralisée ainsi que la diminution de cet index en rapport avec la restriction des sucres alimentaires. On peut ainsi résumer leurs résultats. Chez 1250 individus atteints de carie généralisée, 87.7% accusaient un index L.A. de plus de 1,000 colonies. Chez 265 sujets sans carie, l'index L.A. est moins de 1,000 dans 82.3% des cas. Ceci justifiait ces auteurs d'utiliser cette méthode comme moyen d'identification d'un état de carie actif ou latent.

Dans un groupe de plus de 1,000 sujets, 81.7% manifestent une diminution de l'index L.A. après s'être soumis quelques semaines à un régime où les calories étaient empruntées aux protéines et aux graisses plutôt qu'aux glucides. Chez 750 d'entre eux, la carie s'arrête complètement dans 62.3% des cas, alors que, dans 17.7%, une ou deux caries seulement apparaissent pendant l'année suivante. Ces expériences de Becks ont depuis été corroborées par les enquêtes faites dans les pays européens, qui ont subi l'occupation, et où les rigueurs du rationnement ont été imposées à toute la population. Schour et Massler (46) ont aussi observé en Italie une très faible incidence de carie, environ quatre fois moins qu'aux Etats-Unis. D'autres confirmations nous sont parvenues de France, de Hollande, d'Au-

triche, etc., où les mêmes observations ont été répétées.

On peut donc admettre que la simple abstention de sucres raffinés peut agir dans 70% des cas d'une façon satisfaisante. Il n'est pas nécessaire d'exiger du patient des actes d'héroïsme, si l'on veut que la méthode devienne courante. Il s'agit de persuader l'individu qu'une abstention passagère, mais rigoureuse, pendant quelques semaines; 2 ou 3 parfois suffisent pour que l'index L.A. s'abaisse convenablement. Le sujet pourra par la suite ajouter une certaine quantité de sucre, mais en respectant les proportions rationnelles d'une saine alimentation.

9.—Hygiène buccale

Une récente publication de Fosdick (21b) laisse entendre que l'hygiène buccale la plus élémentaire peut notablement réduire le taux de carie. Si le maximum d'acidité dans la bouche est atteint 20 minutes environ après l'ingestion de sucres alimentaires, ce taux peut encore rester élevé pendant plus d'une heure (18). Malgré cette courte durée, l'effet peut être très préjudiciable à la structure de l'émail en stimulant le métabolisme bactérien de la plaque dentaire. La persistance des sucres dans la bouche stimule donc la production d'acides. Si l'on rince la bouche avec de l'eau après les repas, ceci devrait suffire à éliminer une bonne partie des substances qui peuvent adhérer aux dents. Et si l'on pousse plus loin le souci de la propreté, on enlèvera radicalement tout ce qui est susceptible de servir de substrat aux bactériens acidogènes. Le brossage des dents, matin et soir, ne semble plus logique. On devra le remplacer par une nouvelle pratique, celle du brossage ou au moins du rincage postprandial. On peut mieux expliquer maintenant les échecs malheureux de l'hygiène buccale au sujet de la carie chez les sujets, qui n'accomplissaient ces rites qu'au lever, au coucher ou les deux.

Fosdick ne rapporte que les observations de deux ans, mais elles suffisent déjà à mettre en évidence une diminution de 50 à 60% de la carie chez des groupes de plus de 400 individus.

10.—Vaccination

Williams (17) au Michigan Workshop a rapporté les essais effectués dans l'armée américaine. La vaccination par des souches de *L. Acidophilus* peut entraîner l'augmentation du taux d'anticorps dans la salive. Toutefois ces réactions immunologiques sont de faible durée. Cinq mois après les injections de vaccin, les valeurs observées reviennent au point initial. Il est possible qu'on en vienne à trouver des souches qui puissent maintenir beaucoup plus longtemps cette immunité acquise et contrecarrer d'une façon appréciable le développement des lactobacilles. Le tableau II résume l'efficacité de chacune des méthodes.

CONCLUSION

A la lumière de ces résultats, nous pouvons tirer les conclusions suivantes:

1.—Une diète bien équilibrée est indispensable à la croissance de dents normales et de bonne texture comme à tout organe du corps humain, mais chez l'enfant tout autant que chez l'adulte, l'élimination des sucres fermentescibles, dans les desserts, les friandises et les boissons carbonatées doit être encouragée au maximum.

2.—L'addition de fluor à l'eau de consommation dans une proportion optimum doit être proposée aux commissions d'hygiène afin de rendre la dent, pendant sa période de formation, plus résistante à l'action solubilisante des acides d'origine bactérienne.

3.—L'hygiène buccale doit être généralisée davantage en se rappelant que son application sera valable seulement dans des conditions strictes, à savoir: libérer la bouche des sucres alimentaires aussitôt le repas terminé ou après leur ingestion, quand elle se produit entre les repas, par brossage des dents si c'est possible; sinon, ne jamais omettre un rinçage énergique avec de l'eau claire.

4.—L'incorporation d'inhibiteurs d'enzymes aux sucres alimentaires peut contribuer à la prévention de la carie, si on a auparavant dûment éprouvé les produits et s'être ainsi assuré qu'ils ne sont nullement dommageables. La même remarque

s'applique aux constituants des dentifrices et des rince-bouches.

5.—L'usage des antibiotiques, même si leurs propriétés sont éminemment propices à la lutte contre la carie, ne doit pas se généraliser dans le public; Wallace (55) a raison de dire:

"There are instances in the history of therapeutics in which drugs which have been thought to be harmless and to produce miraculous effects have been found, after years of practical applications, to cause side effects which were more serious than the condition which was intended to be improved by the use of the drug."

Il faut écouter ce sage conseil et ne pas gaspiller, par un usage inconsidéré, un médicament précieux comme la pénicilline, qui a, à son crédit, bien des vies sauvées, mais qui menace de perdre son efficacité à mesure qu'on en multiplie l'usage à des fins fantaisistes.

6.—Il est à retenir que toute méthode de prévention recommandée jusqu'ici est foncièrement imparfaite, à cause de l'ignorance où nous sommes dans l'étude des causes de la carie. Il faut nécessairement faire appel à plusieurs moyens, si nous voulons faire des progrès rapides et durables, sans jamais perdre de vue qu'on doit tendre à l'emploi de moyens simples, sûrs, économiques, à la portée de tous, éprouvés par le temps et l'expérience contrôlée et respectueux de l'intégrité des fonctions de la personne humaine.

7.—Le rôle du dentiste conserve encore toute son actualité et son importance. On ne saurait se priver non seulement de son habileté en ce qui concerne les restaurations, mais aussi de sa conscience professionnelle et de sa surveillance étroite en ce qui touche toute application lointaine ou prochaine de la dentisterie préventive.

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Illustration de la couverture du programme du Congrès de la F.D.I.



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La Fédération Dentaire Internationale*

Notice historique

La Fédération Dentaire Internationale fut fondée à l'issue du 3^e Congrès Dentaire International à Paris en 1900, sur l'initiative du Dr Ch. Godon.

Le premier but du Comité Fondateur était d'assurer la tenue périodique, tous les cinq ans, de Congrès Internationaux.

Afin de préparer l'organisation de ces assemblées, des sessions annuelles étaient prévues, les dirigeants s'y rencontraient assurant ainsi l'exécution des décisions prises dans les différentes commissions, Hygiène, Enseignement, Nomenclature, etc. . . ., ainsi que la surveillance de la trésorerie de cette vaste organisation internationale.

Sous l'impulsion de la F.D.I. des fédérations nationales furent créées successivement permettant ainsi un contact plus intime.

Plusieurs prix furent successivement fondés, destinés à rendre hommage à l'activité professionnelle des confrères les plus distingués dans le monde entier:

Prix Miller, Prix Jessen, Prix Georges Villain.

Une fondation documentaire, dont le grand animateur fut à l'origine notre regretté confrère HUET, un de ceux qui font le plus honneur à son pays, la Belgique, fonctionne actuellement à Bruxelles à l'Institut Eastmann, au parc Léopold, elle collecte et classe toutes les publications dentaires du monde entier, et sur la demande des praticiens, elle communique tous les renseignements bibliographiques susceptibles d'intéresser les chercheurs.

Les comptes-rendus des sessions annuelles sont publiés dans un bulletin en plusieurs langues; ils sont envoyés aux

membres de la F.D.I. Après chaque Congrès quinquennal, des volumes sont édités, leur ensemble forme maintenant une source de documentation qui résume l'activité mondiale depuis cinquante années.

Très prochainement, un Journal Dentaire International sera publié, permettant de suivre de plus près les progrès incessants de la science et de l'art dentaire.

Depuis cinquante ans, le plan d'activité initial élaboré en 1900 a été suivi sans défaillance avec une continuité qui fait honneur non seulement à ceux qui en furent les instigateurs, mais encore à tous ceux qui en ont assuré l'exécution. Malgré les difficultés et les interruptions dues aux deux guerres mondiales, dès 1922 d'abord, et dès 1947 ensuite la F.D.I. un moment arrêtée dans son essor a repris ses travaux.

Les présidents de la F.D.I. furent successivement: Ch. GODON le fondateur, MILLER, SAUVEZ, W. B. PATERSON, T.-W. BROPHY, F. AGUILAR, Georges VILLAIN, N.-H.-C. LOGAN, A.-E. ROWLETT, le Président en exercice est Ch. L. NORD.

Depuis la libération, les sessions annuelles de Dublin 1948 et Milan en 1949 ont commencé à préparer le Congrès Quinquennal de 1952 qui se tiendra à Londres.

Les Lauréats des divers prix décernés par la F.D.I. ont été G.-V. BLACK, Ch. GODON, J.-H. MUMMERY, T.-W. BROPHY, W. DIECK, G. de CASA AGUILAR, Dr M. RAY, Dr CIENTINSKY, Dr H.-J. BURCKARDT, Dr BRODIE.

Tous les confrères mondialement connus ont vu ainsi sanctionner une vie de

*A l'occasion de la 38^e session annuelle de la Fédération Dentaire Internationale, qui a été tenue à Paris, du 23 au 30 juillet 1950, nous tirons ces notes du programme pour faire mieux connaître à nos membres cet organisme international, que célébrait le cinquantenaire de sa fondation.

travail et d'altruisme qui fait le plus grand honneur à notre profession.

Les derniers Congrès sont encore dans toutes les mémoires, Paris 1931, Vienne 1936, ont été des manifestations grandioses qui seront difficilement égalées dans notre Europe encore meurtrie par les événements récents.

La F.D.I., en dehors de sa contribution capitale au progrès de l'Art dentaire, contribue encore à unir dans une collaboration pacifique les praticiens venus de tous les horizons. Elle ne connaît ni le racisme, ni la politique ni les querelles

religieuses. Lorsqu'elle tient ses assises solennelles, chacun se sent entouré de la bonne amitié de tous; pour un temps on a l'impression que l'entente universelle est enfin réalisée. Il serait à souhaiter que l'exemple de la F.D.I. inspirât tous les hommes de bonne volonté et que, dans d'autres domaines, on se décidât enfin à imiter ce qu'elle a su complètement réaliser, sans contrainte, sans dictature, inspirée seulement par le désir d'apporter à l'humanité avec moins d'incertitudes, une existence embellie par la paix, le confort et la santé.



L'ART DU DENTISTE

Qualités nécessaires aux dentistes, pour pratiquer avec succès.

Connaître l'anatomie et la physiologie en général, et particulièrement l'anatomie de la bouche:

L'inflammation, la suppuration et la résolution; le ramollissement et la carie des os:

Connaître au premier aspect, les constitutions et l'état de santé de chaque sujet.

Avoir une taille moyenne; n'avoir rien de désagréable dans son apparence; avoir des dents bonnes et propres.

Avoir des doigts longs et menus:

Beaucoup d'adresse:

De l'invention:

Une conception facile:

Un prompt et bon jugement:

Un caractère aimable, doux, patient, complaisant et bonnête.

Il faut aussi une mise propre, sans luxe.

Extrait de
Théorie et Pratique de l'Art du Dentiste.
par L. LAFORGUE.
Expert dentiste,
reçu au Collège de Chirurgie de Paris.
AN X. 1802.



A propos de la bouche . . .

*Là se module un son plein de douceur,
Là sont formés des accens enchanteurs,
Mots emmiellés, paroles engageantes,
Appâts des sens et délices des cœurs:
C'est encore là, qu'ennemi des langueurs,
S'épanouit le fin et doux sourire;
Tout s'embellit au charme qu'il inspire;
Le ciel ouvert devient calme et serein,
On croit errer au beau verger d'Eden.*

WATELET, traduction d'Arioste.

Pourquoi accuser les autres?

"Rien ne sert de courir; il faut partir à point"

(Lafontaine)

PAUL-E. POITRAS, D.D.S., Montréal

Les relations entre dentistes et odontotechniciens sont si intimes que l'exécution d'une pièce de prothèse sans la collaboration de l'un et de l'autre est presque une utopie.

Les dentistes n'aiment pas entendre dire que les odontotechniciens augmentent leurs revenus de la confection illégale de pièces dentaires: ils sont convaincus que leurs études spécialisées leur donnent des connaissances qui permettent d'évaluer mieux qu'un artisan les besoins d'un chacun. Les leçons d'un subalterne n'ont jamais été reçues de bonne grâce.

Nommez-moi un dictateur ou quelqu'un autre assez puissant pour empêcher les hommes d'enfreindre les lois?

Les gouvernements fédéral, provincial ou municipal, aidés de tous les agents de police, n'ont jamais arrêté la fabrication et la vente clandestines des alcools. Comment voulez-vous régler la pratique illégale? Je n'apprendrai rien à mes confrères en leur rappelant qu'il existe à Montréal un odontotechnicien de langue anglaise dont la personne est tabou, recevant de la pratique illégale des émoluments annuels de plus de dix mille dollars! je ne compte pas le salaire gagné au laboratoire.

Loin de moi la pensée de blâmer le Collège des Chirurgiens-Dentistes de n'avoir pas toujours du succès dans maints cas d'illégalité. Combien de gouverneurs, nouvellement élus, ont crû trouver l'aide nécessaire pour empêcher la violation de la loi, alors que, paralysés par des liens de provenance inconnue, ils ont démissionné avec l'espérance que leurs successeurs seraient plus heureux?

En général, les odontotechniciens sont des gens consciencieux; ils veulent observer la loi à la condition que certains dentistes ne les forcent pas à la violer.

De la peur de perdre un patient, les dentistes abaissent souvent leur profession à un métier; les fautes vénielles ont

quelquefois des suites graves. Un conseil demandé à un odontotechnicien, devant un patient, tôt ou tard, amènera le pire, alors qu'une consultation avec un confrère aurait été plus logique et plus scientifique.

Le patient, dans votre fauteuil, témoin de scènes semblables, donnera une grande valeur à cet artisan; par la suite, ce patient ne verra aucune nécessité de payer des honoraires à un monsieur obligé de recourir aux connaissances d'un technicien; il fera fi de l'enseignement universitaire; au besoin, il se dirigera vers le laboratoire pour des travaux: prise d'empreinte, correction de l'articulation, choix de couleur et de forme de dents artificielles, ouvrages d'ajustment et les réparations.

Combien d'abus seraient évités si le licencié se souvenait de son serment d'office: "Je, licencié en chirurgie dentaire, promets et jure solennellement de soutenir et de défendre l'honneur et la dignité de la profession et d'observer fidèlement la loi et les règlements du Collège des Chirurgiens-Dentistes de la province de Québec".

Quand l'Association des Techniciens Dentaires de la Province de Québec, (mot hybride donné par leur charte) ira devant la Législature du Québec solliciter plus de pouvoirs, le demandeur pourra insérer, parmi les nouveaux amendements, une clause donnant droit à ses membres de poser et d'ajuster dans la bouche toutes les pièces de prothèse: travaux déjà exécutés en marge de la loi par un nombre de plus en plus grand d'ouvriers.

Combien de charlatans-techniciens sont heureux d'être désignés du titre de docteur, et sans aucun droit, n'était la crainte du pire, ils mettraient devant leur nom "Dr" pour qu'on les croit dentiste, à cause d'un vague diplôme de technicien; ces primaires, ont la prétention d'être des experts en chirurgie dentaire: ils ont

écouté et mal digéré quelques cours hâtivement préparés en vue d'examens futurs qui, réussis, les feront gonfler comme la grenouille de la fable.

Vouloir l'amélioration du sort de l'ouvrier est une entreprise louable; mais pourquoi lui fournir des armes qui seront utilisées, un jour ou l'autre, contre nous.

Même si je ne fais pas plaisir à tout le monde, il est grandement temps de démasquer certaines menées des odonto-techniciens, pour ne pas prendre des vessies pour des lanternes.

Pour vaincre, nous devons avoir une connaissance de toute la science dentaire moderne.

Nous ne devons pas avoir peur de consulter un confrère.

Nous ne devons pas agir de façon à laisser croire que le technicien a des connaissances plus avancées que le dentiste.

Nous devons reconnaître la nécessité du technicien, sans être obligé de lui demander son avis.

"Faute d'un clou, Martin perdit son âne."

Départ dans la vie professionnelle.

Nous voudrions donner quelques maximes susceptibles d'éviter des erreurs au jeune praticien et de lui permettre de partir sur une base solide.

Plus longtemps on basera sa méthode de travail sur les principes classiques, plus vite on obtiendra la maîtrise de son métier.

Si l'on quitte les méthodes classiques par présomption, par inconscience des responsabilités qui nous incombent ou encore faute de guide dans les premières années de pratique, plus vite on se rendra compte de cette fausse direction, plus vite aussi on aura des chances de repartir sur un bon pied.

Plus vite on donnera le coup de barre, plus facilement aussi on pourra se débarrasser des mauvaises habitudes.

Plus vite on s'apercevra de la fausse route, moins la clientèle risquera de s'en apercevoir.

Le retour aux principes classiques, la pratique suivie de ces derniers pendant de longues années permettront seuls la possession complète des moyens.

Il n'est pas mauvais de faire une fois ou deux de l'émancipation, car on se rendra vite compte du danger que cela comporte.

C'est parfois nécessaire pour démontrer que la route classique n'est pas si monotone, mais n'abusez pas de ces essais.

Si l'on veut faire de l'émancipation, qu'on le fasse seulement après l'acquisition d'une certaine maîtrise et après avoir examiné tous les éléments mécaniques, physiologiques et anatomo-histologiques susceptibles d'éliminer les risques de la nouveauté.

Ne traitons pas l'enseignement de l'Institut dentaire de chose surannée et sentant le moisi, car en Suisse, nous avons le privilège d'avoir des Instituts de tout premier ordre.

Ne quittons pas non plus le contact avec nos anciens maîtres. Le mot (ancien) peut être supprimé et disons plutôt . . . avec nos maîtres. Il y a tant de cas où un conseil expérimenté prévaut sur l'initiative.

Rappelons-nous que la suite de l'Institut dentaire est la S.S.O. et que là, nous trouverons enrichissement dans les choses professionnelles et dans les amitiés.

L'appui donné à la S.S.O. est le meilleur moyen d'être protégé dans les questions juridiques, dans les assurances, dans les affaires militaires, dans les questions de fournisseurs. C'est un égoïsme bien placé.

Avant de proposer un traitement à un patient, demandez-vous toujours si cela rentre dans ses possibilités financières.

Avant de décider telle ou telle forme de traitement compliqué, demandez-vous si vous appliqueriez ce traitement à votre mère ou à votre soeur. Voilà un critère étonnamment efficace.

Dans vos rapports avec la clientèle, dites vous toujours que vous êtes là pour le client et non le client pour vous.

La ruine d'une pratique vient souvent de ce qu'on traite la clientèle en quantité négligeable.

Traitions le clientèle quelque soit sa classe avec le respect qu'on doit à ceux qui nous apportent notre pain quotidien.

Ne laissons toutefois pas cette clientèle prendre des libertés au sujet de ses devoirs financiers vis-à-vis de nous. Une politique ferme et bien mise au point à l'avance préviendra bien des privautés, mais pas toutes hélas!

Dans un cas épineux, radiographie, bridge ou autre chose, n'hésitez pas de prendre l'avis d'un ou de plusieurs confrères. La discussion qui en résultera sera toujours un enrichissement pour chacun.

L'idéal serait de pouvoir exposer ses réflexions, ses expériences, mais la médisance vous accusera de jobardise et de suffisance. Persévérez, mais avec prudence.

Quand vous avez eu le privilège d'assister à un Congrès ou à un cours de perfectionnement, quand vous avez trouvé dans un livre ou une Revue une chose utile, faites en un compte-rendu à vos confrères ou à la Revue de la S.S.O.

Il vous arrivera souvent de croire que vous avez fait une invention, mais ne vous découragez pas si dans le numéro suivant d'une Revue américaine et dans un journal allemand, vous trouvez un article d'un chercheur ayant fait simultanément la même invention.

Ne vous découragez pas non plus si l'article de l'autre Revue reporte la date de votre soit-disant invention à 40 ans en arrière. Il y a un cycle qui revient tous les vingt ans environ.

Le jour où vous croirez tout savoir mieux que les autres. Attention! le jour d'un cuisant échec est proche. La Roche tarpéienne . . .

Bonsack.

Revue mensuelle suisse d'Odontologie, Tome 52, 1942, no 3.

Les dentistes américains prônent que chacun devrait faire examiner ses dents, tous les six mois. Le mois dernier une enquête Gallup montrait que 45 millions, des 96 millions d'hommes et de femmes au-dessus de vingt-et-un ans, aux Etats-Unis, n'avaient pas vu de dentiste depuis deux ans. Parmi ceux-ci, 30 millions n'étaient pas allés chez le dentiste, depuis plus de quatre ans, et quatre millions n'avaient jamais fait traiter leurs dents.

Thanksgiving

We plow the fields, and scatter
the good seed on the land,
But it is fed and watered
by God's almighty hand;
He sends the snow in winter,
the warmth to swell the grain,
The breezes and the sunshine
and soft refreshing rain.

He only is the Maker
of all things near and far,
He paints the wayside flower,
He lights the evening star;
The winds and waves obey Him,
by Him the birds are fed;
Much more to us, His children
He gives our daily bread.

We thank Thee, then, O Father,
for all things bright and good,
The seed-time and the harvest,
our life, our health, our food;
Accept the gifts we offer,
for all Thy love imparts,
And what Thou most desirest,
our humble, thankful hearts

—MATTHIAS CLAUDIUS



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The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, OCTOBER, 1950

No. 10

SOME OPINIONS RELATING TO ORAL SURGERY

by W. SCOTT HAMILTON, D.D.S., F.A.C.D., F.D.S.R.C.S.

HAVE you ever heard a patient say, "I have never been well since I had my teeth removed"? It could just as well have been tonsils, adenoids, a carbuncle or gall bladder, as teeth. O'Brien and Rubin report that in one year 101 cases of severe infection of the face and neck, of dental origin, were admitted to King's County Hospital. Of these two were fatal. This is bad enough and constitutes the type of case which gives us most concern, since it is so suddenly and forcibly thrust upon us, sometimes by relatives and friends of the patient.

The present concern is more with that type of case, where no extreme acute condition appears, but where there is a slow, progressive decline in health; the type of case which can, with a favourable imagination, be attributed simply to poor health.

Diagnosis and surgical judgment are far more important than surgical technique. In matter of fact, the one who is clever only in his surgical skill is nothing more than a capable technician, and deserves little higher status than the laboratory technician or mechanical artisan in a watch factory or aircraft plant. "Practice makes perfect." What goes on before and after the surgery is of far greater importance and value to a patient than the session in the operating room which, in the minds of the public and sometimes the profession as well, has been placed upon an undeserving pinnacle

of exalted and spectacular prominence. This does not in any way minimize the gravity of a situation where, after all necessary pre-operative care and consideration, one makes a blunder of the task at hand. Someone once asked, what was the most important thing in Dentistry, and got the reply, "The task you are performing at any one given time". No mention was made of the comparative financial return for various types of service.

We must guard against the acquisition of a narrow viewpoint, something which, because of the very nature of dental practice, becomes a grave danger. Whatever a man's specialty may be, he must constantly be on guard lest he become narrow in his outlook. The oral surgeon can easily stray into the position of considering each patient only from the standpoint of his field, whereas one who stresses conservative dentistry may become conservative to the point of slowly damaging a patient's health. These two attitudes have reached their maximum by Medicine and Dentistry being practised as separate professions. It is sometimes difficult to persuade the dentist that the insertion of a restoration, in a patient's mouth, may influence the general health, for good or for ill.

BASIC SCIENCES

The application of the basic sciences to practice, is today receiving considerable attention, from those who are

interested in dental education. For example, what use do we make of our knowledge of pathology, or how often does a dentist submit tissue to the pathologist for examination? Some will say that such a procedure belongs in the field of medicine. Dentistry came into being in the first place, as a mechanical art and was limited entirely to the restoration of lost tooth tissue. It later became a science and was raised to professional status, mostly because of lack of interest shown in the mouth by the medical profession. Today, medicine, generally speaking, is quite prepared to let us assume full responsibility for the diagnosis and treatment of that part of the human organism. The degree to which this applies differs greatly in different localities.

If we wish to be recognized as a true profession, we must assume fully the responsibilities mentioned above. It is not good enough to restrict our activities to the preservation or restoration of the teeth alone, although that is important and should consume a great deal of our time, but as well we must develop more men who are qualified to take care of the whole mouth and its adjacent structures. I am not one who accepts that one has to have full medical training in order to suture a laceration of the face. I have been told that during the war, a dentist in the corps was not allowed to insert a pin into bone, or perform an open reduction for treatment of a fracture of the jaw, with the result that the open reductions and pin fixations were done by general surgeons, who sometimes had not a full appreciation of the value of proper intermaxillary relationship. The dentist, on the other hand, was limited mostly to splints, with the result that there was the danger of trying to apply them to impossible situations.

ANTIBIOTICS

Dentistry is also handicapped in respect to knowledge pertaining to new drugs coming on to the market, and

with the rapid development of antibiotics this is a serious situation. In some cases, detail men from drug houses, who call on the medical profession, are prevented from visiting us, because of an agreement between them and the dental supply houses or manufacturers. When they come to us with, say penicillin, we find that they think we should limit its use to local application or injection with local anaesthetic solutions. It has been stated by medical men, who have had severely infected cases referred to them following dental operations, that they do not appreciate that type of practice, and the dentists should be taking care of them.

As you may have already surmised, I have chosen no special theme for this paper, but rather prefer to present those things which are considered essential to the proper protection of the health of our patients. The older men in dentistry today did not receive complete training in the basic sciences or their application to clinical practice, and so I make a special appeal to the younger men to take up this breach in our work, and improve the status of our profession. As a starting point I would refer you to the critical analysis to be found in "Dental Education Today", by Horner; "Dental Education in the United States", by O'Rourke and Miner; and "Dentistry, An Agency of Health Service", by Carr. When you have finished reading those books, I am sure you will be convinced that there are enough required improvements to keep you all busy for many years; and do not be discouraged by those who contend that the task is impossible or unnecessary.

DIAGNOSIS

This is a subject large enough for many magazine articles and I do not propose to try to cover it in detail. From the standpoint of oral surgery, as well as other branches of dentistry, radiological records are so indispensable that we are inclined to depend upon them altogether too much, and

those of us who err on the conservative side can easily overlook some slight shadow, as just a variation in the normal. Along with the radiograms must go a careful visual and digital examination. When we reach the conviction that we are practising dentistry for the protection of the whole body, we will find ourselves taking account of the patient's temperature, pulse, blood-pressure, and there is no reason why we should not, in specific cases at least, have blood-counts, bleeding and clotting time, sedimentation rates and urinalysis. A number of patients, admitted to hospital for oral surgery, were discovered to have diabetes when pre-operative urinalysis was done. A physician discovered that he had the disease, only after a tooth-socket had failed to heal three weeks after tooth removal. Someone may contend again that we should leave all this to the medical profession, but there is no reason why we should not, at least, discover what may be abnormal in these biological tests, and then decide whether or not a complete physical examination should precede our treatment. If we have these tests made by a laboratory and examine the results, it will do considerable to make us health conscious, and in so doing, we will not be invading the field of medicine. If we do decide upon a consultation, we can hand over to the physician all our findings.

FOCAL INFECTION

During their lifetime, many men now practising have passed through three phases of the application of the theory of focal infection. At one time it was almost considered a disgrace for a dentist to fail in an attempt to retain a tooth in the mouth in comfort. The effect on the health was not recognized. At a later time pressure was exerted to get rid of the teeth for the cure of almost everything. It was, as usual, given prominence in the press and the laity came to us demanding tooth removal.

Focal infection is just as sound a theory today as it ever was, but it must be applied in an intelligent manner. It is also just as true today that we have little hope of curing a patient of arthritis by removing his teeth, even when they are obviously infected. The point that is too often overlooked, is that this same infection may still have been the cause of the arthritis, or whatever the secondary lesion may be. The thing that we forget, is that the secondary lesion has become permanently established in another tissue of the body. It is much easier to establish this point by a reference to carcinoma. If you find a primary cancerous lesion on the lip, which has established a secondary lesion in the liver, the complete cure of the condition on the lip is not going to save your patient.

PAIN

Right within our own field, you are all familiar with the suffering caused by trigeminal neuralgia. You have also read how the removal of teeth will never cure the disease, and it is true that once it has reached the stage where excruciating spasms occur, nothing but alcohol injections or surgery is likely to give relief, and yet on rare occasions a cure does take place. However, we must not lose sight of the fact, that away back several months previously, the patient probably had mild symptoms which he does not now recall. It is now believed that this disease does come from some type of irritation, either infective from pressure, extreme thermal shock, etc.

The source of pain is not always easy to establish, particularly in the acute stage. Eventually, however, a patient can, by concentration, establish its origin. The injection of local anaesthetics is one means of eliminating an area, in trying to establish a diagnosis.

No doubt most of you have been perturbed by patients complaining of hyper-sensitive small areas on the mucous membrane. They always occur in an area where surgery has been

performed. A neuro-surgeon has suggested that they are likely neuro-fibromata. When healing takes place, the small nerve filaments in the area become compressed in the scar tissue. The injection of a local anaesthetic, under considerable pressure, will sometimes give a cure, by stretching the scar and relieving the pressure on the filaments.

Every dentist is confronted with pain in the region of the maxillary sinus. This may arise from the sinus itself, from diseases of the teeth or neuralgia. We sometimes engage in a game of "passing the buck" with the rhinologist. All too frequently we see patients, with a mouth in better than average health, except that all the molars on one side of the maxilla are missing, having been removed in error as the source of pain which in reality had been caused by a maxillary sinusitis. A sinusitis will also produce a periodontitis. In trying to make a differential diagnosis, we should always keep in mind that while a sinus can become infected from the mouth, a very high percentage of cases have their origin in the nose. In a case where the rhinologist has pronounced the sinus normal, and where the source of pain cannot be established, a large opening through the canine fossa may have to be made in order to observe the lining. If it is thin and light in colour it can be considered to be normal.

ANAESTHESIA

It is not my intention to discuss local anaesthesia at any length, for I believe that most dentists are very efficient in this field. In our hands, we have found the fresh alkaline solution the most effective and satisfactory agent.

There are certain solutions such as Quinocaine which produce prolonged anaesthesia. Quinocaine is a solution of nupercaine, quinine hydrobromide, benzyl alcohol, physiological salt solution and Ciba's brand dibucaine. It will produce anaesthesia, which will last for from twenty-four to forty-

eight hours, and is extremely useful following the removal of deeply impacted teeth, reduction of fractures, or any operation where severe post-operative pain is anticipated. Surgical pain is otherwise very often unavoidable and usually lasts about twenty-four hours. Pain beyond that time must be considered as originating from some other cause.

General anaesthesia, in relation to the practice of dentistry, is so controversial at the present time that one hesitates to express an opinion. There are two main schools of thought—(1) those who adhere to the old technique of limiting anaesthesia pretty much to the one agent, nitrous oxide; (2) those who recognize that nitrous oxide, while seldom causing death, may do very serious and permanent damage to brain cells, if the oxygen content is cut below 20%. We must not lose sight of the fact that in medicine, anaesthesiology is now recognized as a specialty, requiring two or three years' graduate study.

OPERATING ROOM TECHNIQUE

One of the greatest errors is that oft repeated claim, that since we are working in an infected field, there is no need for aseptic precautions. Those who hide behind this fallacy are very satisfied with their position when a patient develops a severe post-operative infection. This position of false security has arisen because of the knowledge that the mouth normally contains a variety of bacteria, and it is therefore useless for us to attempt any aseptic procedure. This conception comes from a lack of what aseptic surgery really is. Just because we are going to incise an abscess, which is full of bacteria, is no reason why we should introduce other strains of organisms. When we interfere with the continuity of tissue, we immediately lower its resistance to bacterial invasion. This contention is based upon the most modern scientific conception of infection, and we can no longer afford to feel secure, except by taking

due care in our surgical procedures. This is one of the most difficult phases of oral surgery to teach, and can be explained, at least in part, by the fact that in most other branches of dentistry, with the possible exception of root-canal therapy and periodontia, asepsis is not necessary, since we are not working in the blood-stream. All dressings, towels and instruments used in oral surgery must be sterile, and gloves should be worn. When operations are performed in the operating room of a hospital, the usual aseptic and surgical technique employed in that hospital must be followed.

It is very true that in most cases we can avoid complications without such precautions. It is also true that we usually have no infection, when we cut our fingers while working in the garden or in our hobby shops, but that does not alter the fact that many deaths have occurred from insignificant cuts and lacerations. If you will make rounds in any hospital, you may be surprised at the number of dental post-operative infections you will see. When an infection becomes severe, patients will sometimes ignore the dentist and call their physician, and all too frequently the patient is admitted to hospital, treated and discharged, without the dentist's knowledge.

CHEMOTHERAPY

With the introduction of antibiotics began a new era in medicine and dentistry.

An antibiotic is a substance produced by, or derived from living cells, which is destructive to other living cells. As an antibiotic, penicillin has continued in prominence since its discovery, but it would be unscientific and unreal for us to assume that it fills all our requirements in combating infections. Streptomycin, streptothricin, aureomycin and bacetyacin are examples of known substances. Many others, yet to be discovered, may exceed penicillin. Already it has been found, for example, that while penicillin is effective in certain cases, and streptomycin or aureomycin in others, that a mix-

ture of two agents by their synergistic action, will take care of a greater variety of infections. No one of repute will examine a patient and say for certain that he required, say, penicillin. The honest man will say that, if one therapeutic agent fails, he will try another. We have not yet reached the stage where we can work out our problems on a mathematical basis. Observation and intensive interest in the welfare of our patients, who have shown sufficient confidence to place themselves in our hands, is a professional obligation.

All patients, requiring oral surgery, need not be placed on antibiotic therapy. It is common knowledge that following scarlet or rheumatic fever, cardiac valvular lesions are not uncommon. This may result in sub-acute endocarditis, and where this is known to be the case, the patient should receive consideration when surgical interference is required. The opinion of his physician is of utmost importance. Similar precautions must be taken with patients who are debilitated in any way. Urinalysis and blood counts with a haemoglobin determination are indicated more often than is the practice. If chemotherapy in any form is indicated, we should not hesitate to use it, but to prescribe it routinely is wrong.

When penicillin first came into use it was found to be very effective. At the present time it is found to be losing its potency in certain diseases for the reason that resistant strains of bacteria have developed. This may be accounted for by reason of its ready availability to the public in small doses, such as pastilles, which may be found in almost every medicine cupboard. There is no doubt that it will, as a rule, clear up the acute phase of Vincent's infection very quickly, but any periodontist will tell us that when that stage is over, we have only started in the proper care of the condition.

So it is that penicillin alone is of little or no value in the treatment of an abscess which is already establish-

ed. It can never take the place of good surgery for it is inactivated in the presence of pus. After the pus is evacuated, it is of value in killing off the bacteria which are left in the tissues.

Only recently in our clinic an unerupted cuspid was removed through a palatal flap. All our surgery patients are given a mimeographed sheet of post-operative instructions in which they are advised what to do if any complications arise. Six weeks after the operation this patient returned. We found that the central and lateral incisors were extremely loose and there was a large area of necrosis in the palate. On making enquiries we discovered that she had been using penicillin pastilles. If the wound had been irrigated and kept open for a few days with a drain, healing would likely have taken place.

The indiscriminate and improper use of such agents means that we will eventually do more harm than good. If you are going to use penicillin, use plenty of it and kill all the bacteria possible. If you use a light dose the weaklings are killed, while the strong get just enough to stimulate them into resisting the substance, and after this has taken place a few times, a very robust penicillin resistant strain of the organism is created.

The following is the recommendation of the American Heart Association:

"Following dental extractions and removal of tonsils and adenoids, bacteria are frequently present in the blood stream for short periods of time. In rheumatic individuals or in patients with congenital heart disease these bacteria may lodge in the heart valves and cause bacterial endocarditis. Although a variety of bacteria cause this disease, the majority of cases are due to alpha streptococci, (*streptococcus viridans*). Alpha streptococci are usually resistant to sulpha drugs. Penicillin is, therefore, recommended for prophylaxis.

1. Except in emergencies operative procedures in rheumatic individu-

als should be deferred until there is no clinical evidence of rheumatic activity and laboratory tests indicate that the rheumatic process is subsiding.

2. Patients should be free from upper respiratory infection.
3. Minimum dosage of penicillin:
 - (a) 300,000 units of aqueous penicillin intramuscularly 30-60 minutes before extraction or operation.
 - (b) 300,000 units of procaine penicillin in oil injected intramuscularly at the same time in a different site."

TUMOURS AND FRACTURES

I shall not attempt to deal extensively with these two topics. Needless to say, the important point in dealing with tumours is diagnosis and recognition of the distinction between benign and malignant growths. The book recently distributed by the Cancer Society should be thoroughly digested by every dentist. Carcinoma sometimes begins like an ulcer or may resemble hypertrophy. Recently a case was treated as an ulcer for over a month and when a biopsy was done, it turned out to be a squamous cell carcinoma. Sarcomata in the early stages can easily be mistaken for a cyst or osteomyelitis of bone.

Benign tumours are numerous and when properly diagnosed the treatment consists in complete removal only.

Cysts are more common and more easily diagnosed. There are two main methods of treatment. The lining may be entirely removed and regeneration of bone stimulated by constant irrigation and packing, or the Partscht technique may be used, and in most cases it is preferable. A few cases have been treated by removing the lining and filling the cavity with cancellous bone which was taken from the crest of the ilium. The advantage is that prolonged after-treatment is entirely eliminated. It would not be necessary to recover bone from the ilium in every patient,

for when a case is being done some extra bone can always be taken and kept in deep-freeze. Cadaver bone may also be stored in the same manner.

A very common error, in considering cysts, is to assume that all teeth which appear in the shadow of a cyst have to be removed, for actually it is rarely necessary. Even in large cysts of the mandible the roots, along with their nerve and blood supply, are usually pushed aside. If the Partsch operation is done, a nearly complete regeneration of bone will take place and the teeth can be saved, for their roots are usually outside the cystic lining.

Simple fractures of the jaws, when most of the teeth are present, can sometimes be handled by the general practitioner, particularly in smaller centres. Intermaxillary fixation can easily be applied and is hard to beat. The specialist who is called upon to take cases as they come, must be prepared to employ whatever method is indicated, including open reduction, skeletal fixation, attachment to head

appliances, etc. Where there is loss of bone, he must also know how to do a graft. Even though the rib may be obtained by a general surgeon, the oral surgeon is usually more capable of applying the graft to a jaw.

The surgical treatment of prognathism or retrusion of the mandible is a subject which should receive more support from both the dental and medical professions. It is sometimes said to be too risky. My experience, as well as that of others, is that the change in personality in these people makes the operation look insignificant. Many of these people make themselves into social outcasts. Improved function is of course also important. As for the risk, Blair and Ivy have this to say, "Non union of fractures of the mandible are rare and in all the literature in the Surgeon General's library there is not reported, in English, French or German, a single case of loss of teeth or bone from sectioning of the mandible."

University of Alberta, Edmonton, Alberta, August 1950.

THE GEORGE WELLINGTON GRIEVE MEMORIAL LECTURE

AT the May Meeting of the Board of Governors of the C.D.A. approval was given the establishment of the George Wellington Grieve Memorial Lecture. This action was taken by the Board following a recommendation from a group of Canadian orthodontists who met a few days before the meeting of the Board of Governors. The George Wellington Grieve Memorial Lecture is the first Canadian dental lectureship and is a fitting memorial to an outstanding dentist.

In his early years of specialization, Dr. Grieve displayed a characteristic independence of thought when he advocated the removal of certain dental units in selected cases before the commencement of orthodontic treatment. He had found that when this procedure

was followed the teeth remained in better position after the completion of orthodontic therapy. This thesis was at variance with the teachings of Dr. E. H. Angle whose course of instruction in Orthodontics Dr. Grieve had taken in 1907. It was gratifying for him to witness during his later years acceptance of his thesis by a large number of his orthodontic confreres. Because of this independence of thought, as well as his meticulous attention to detail, Dr. Grieve earned an international reputation. He received invitations to present scientific papers before many dental and orthodontic societies in Canada, the United States, Great Britain and France.

In 1940 he was the recipient of the Albert Ketcham Award from the

American Board of Orthodontics. But it is not only for his achievements as an orthodontist that Dr. Grieve is posthumously honoured. He strove constantly for the best in dentistry, particularly in its educational and clinical aspects.

For many years he was Chairman of the Educational Committee of the Canadian Oral Prophylactic Association which was the only dental organization conducting public health education in Canada at that time. In this capacity he performed an invaluable service to Canadian dentistry. Through his scientific papers, as well as through his daily personal contacts with members of his profession, he wielded a strong influence for the betterment of dentistry.

One of Dr. Grieve's objectives during his years of practice was to encourage more dentists to include orthodontics in their practices and much of his teaching was directed to the accomplishment of this objective. The establishment of the Lectureship in his memory can be adapted to the continuance of this important objective.

CONDITIONS GOVERNING THE GRIEVE MEMORIAL LECTURESHIP

1. A fund to be established by the Canadian Dental Association known as the Grieve Memorial Lectureship Fund, to be provided through voluntary contributions of the members and from any others who wish to contribute.
2. The total contributions of the fund to be invested by the Secretary Treasurer of the Canadian Dental Association upon the authorization of the Executive Committee in a trust, the trustees of which will be the persons named in 6.
3. The income from the investment of the principal sum of the fund to be used for defraying the travelling expenses of a lecturer.
4. The lecture to be delivered on an annual basis if an individual is deemed worthy of the honour.
5. The basis for the selection of an individual to receive the invitation

to prepare and present the lecture shall be any meritorious service in the scientific, educational, or clinical aspects of orthodontics, or in any other closely allied field of activity.

6. For the purpose of selecting an individual to deliver the lecture a special committee will be set up composed of the Secretary of the Canadian Dental Association, and the Chairman and Secretary of the Orthodontic Section. The selection by this committee must be unanimous and their decision will be final.
7. The time of the lecture will ordinarily coincide with the annual meeting of the Canadian Dental Association.

The Board of Governors, at its last meeting, also authorized the formation of a section for orthodontic specialists within the structure of the C.D.A. The officers of the newly formed Orthodontic Section are: Chairman, Dr. Rayburn R. McIntyre, Calgary, Alta.; Secretary, Dr. Braithwaite Dixon, Ottawa. These officers will provide an opportunity for each Canadian orthodontist to contribute to the Lectureship Fund.

A twofold purpose can be served by the Lectureship. Firstly, to memorialize the contribution which Dr. Grieve made to orthodontics and secondly, to develop the broad concept which he had of orthodontics as a part of the general practice of dentistry.

To implement such a project, an amount in the neighborhood of \$5,000 is deemed necessary. A number of the orthodontists of Canada and the United States have subscribed a sum slightly in excess of \$1,500 and this announcement is being made in anticipation of the active interest and support of the profession in general. All contributions should be made payable to the Grieve Memorial Lectureship Fund and sent to Dr. Don W. Gullett, Treasurer, 211 Huron St., Toronto, who will issue an official receipt which may be claimed as a deductible item for income tax purposes.

THE STATUS OF DENTAL PREVENTIVE MEASURES IN 1950*

by H. K. BROWN, D.D.S., Ottawa, Canada

Chief, Dental Health Division, Department of National Health and Welfare

IT is the purpose of this paper to discuss measures directed at the prevention of dental caries. No attempt will be made at this time to deal with the prevention of irregular teeth and diseases of the gums. Caries is the earliest and major dental hazard of childhood. About 99 per cent of children in the 14-year age group living in areas where no fluorides occur naturally in the water supply, have a caries history.

A brief survey of the causes of dental caries will help in understanding the methods directed at its control. As in the case of most other diseases, these fall into two general categories; the direct and the indirect, or, if you like, the immediate and the predisposing. For over fifty years acid action on the enamel has been suspected of being the direct cause. Conclusive evidence is now available¹ which shows that the initial lesion is due to lactic acid formed by the action of acidogenic bacteria on carbohydrates—more specifically, the soluble carbohydrates. These provide the substrate from which certain acidogenic bacteria, by enzymatic action, form lactic acid within the bacterial plaques around the tooth, causing dissolution of the enamel. This opens the way for the action of proteolytic bacteria upon the organic portion of the dentine. There may be other immediate causes which have not yet been discovered. But certainly this is the major one.

Some of the known predisposing factors are: the composition and morphology of the tooth and its position in the arch; such properties of the saliva as buffering capacity, viscosity, quantity, anti-bacterial qualities; the

nature of the diet, its physical properties and carbohydrate content.

Caries preventive measures now in use have three aims: 1. to decrease the rate of acid formation in the bacterial plaque around the tooth; 2. to decrease the acid-solubility of enamel; 3. to increase the rate of acid neutralization in the plaque.

Acid formation in plaque and food debris around the teeth depends upon the presence of acidogenic bacteria and a soluble carbohydrate substrate². A minute or two after the ingestion of sugar a hydrogen ion concentration below pH 5 can be demonstrated in plaque material in a caries-susceptible mouth. pH 5 is the average dissolution point of enamel. A concentration of pH 4 and lower is often reached and maintained for periods in excess of an hour, finally rising above the enamel dissolution point as the acidity of the plaque is buffered by the saliva. This suggests that the frequency and duration of attacks of tooth decay could be governed by intelligent eating habits and properly planned oral hygiene.

Brushing the teeth immediately after eating removes the carbohydrate substrate, reduces the bacterial count and raises the hydrogen ion concentration of the plaque above the critical pH 5. The effectiveness of an oral hygiene program based on the theory of early interruption of the acid period occurring in the dental plaque immediately after eating was clearly demonstrated this year by a controlled investigation carried out under the supervision of Dr. Fosdick, Professor of Chemistry at North Western University, Chicago³. A statistically adequate test group, brushing the teeth with a neutral den-

*An address presented before a joint meeting of members of the Canadian Home Economics Association and the Canadian Dietetic Association at McGill University, July 7th, 1950.

tifrice within ten minutes after eating, or rinsing the mouth with water whenever the use of a brush was not convenient, obtained a reduction during a two-year period, of about 60 per cent over a control group using a night and morning routine.

A temporary reduction in the carbohydrate content of the diet without interference with nutritional needs is a very effective method to reduce caries activity. It is usually reflected in a marked drop in the oral lactobacillus count⁴. This drop in count is so consistently associated with a decrease in carbohydrate intake and reduction in caries that it is in wide use as an index of caries activity. After a temporary reduction in sweets the average patient may return to their moderate use and retain his immunity for a matter of several months—or until his oral lactobacillus count rises to the caries level when it may be again reduced by decreased dietary carbohydrate. This is one proven, simple, practical caries preventive measure. Several State Department of Health laboratories in the United States do routine counts from salivary samples as a regular service to dentists practising preventive dentistry. There has been little action as yet in this field in Canada.

FLUORIDES

During recent years a great deal of interest has centred on the use of the fluorides to prevent dental caries. There is irrefutable evidence that children born and brought up in areas where the water supply contains from 1 to 1.5 PPM of fluorine from natural sources have almost 66 per cent less dental decay than those reared in districts where the water contains no fluorides. Recent examinations of over 1,300 children in Stratford, Ontario⁵, have further amplified this evidence. The fluorides have the effect of making the enamel less soluble in acid, and also inhibits the action of enzymes responsible for the degradation of sugar to lactic acid; apparently it also inhibits the growth of the oral lactobacillus.

Whether equally beneficial results can be obtained from the artificial fluoridation of public water is not yet known. A carefully controlled experiment has been in progress in Brantford, Ontario, since June, 1945, but no full and conclusive evidence is expected until a statistically significant group of children born in Brantford since June, 1945, and in continuous residence there, have had time to calcify and erupt a set of permanent teeth. Their twelve-year molars will be erupted by 1957. However, it is possible that acceptable evidence may be available before that time. As yet we do not know.

Much experimental work⁶ has been done on the topical application of fluoride solutions to the enamel of the teeth. Several compounds of fluorine have been tried in different dilutions and in varying hydrogen ion concentrations, and by differing techniques. Much yet remains to be done where properly planned and controlled experiments can be set up. Out of all the work done in this field up to the present, one practicable and effective caries control measure has emerged. It has been shown by John Knutson⁶ of the United States Public Health Service that a 2 per cent solution of sodium fluoride when applied to the teeth of children by a definite procedure will reduce the incidence of new decay by 40 per cent over a large group. And this year evidence has been obtained to indicate that topically applied sodium fluoride is equally effective on adults⁷. All people do not benefit equally. Some experience little or no reduction in new decay, while others have a very great reduction. It is thought that, among other things, these differences are due to variations in sweets consumption and oral hygiene practices. Considering that only about 25 per cent of adult needs are met by ordinary treatment—and a much smaller percentage of child needs—this figure of 40 per cent would seem to be of considerable importance. However, the procedure used is time-consuming and the dental profession

was more than fully employed dealing with the results of dental disease before this new method was placed in its hands. Hence its wide application has not been possible. There are two urgent needs to be met before anything like the full benefits of the topical use of fluorides can be made available to all those in need of it; one is for further research aimed at shortening the time for the technique of application, without loss of effectiveness; the second need is for a properly trained auxiliary dental group to handle it—and I emphasize the words properly trained.

Considerable experimental work⁸ has been done on the use of fluorides in mouth washes, dentifrices, and tablets for ingestion. There is no acceptable clinical evidence that any of these methods is effective.

UREA COMPOUNDS

Some interesting and perhaps promising research work⁹ has been done, and is still in progress, on the use of certain urea compounds—chiefly carbamide and dibasic ammonium phosphate—to prevent caries. The bacteriological evidence appears to be good, but, as yet, there is no acceptable clinical evidence that these compounds are effective. Such evidence should be available within a couple of years, from experiments now in progress in the United States.

PENICILLIN

Dentifrices containing penicillin have been shown to be effective in reducing the incidence of caries in rats and hamsters. When used in humans, immediate and marked reduction in oral lactobacillus counts occurred in nearly every case. This year it has been reported that from a controlled investigation conducted in Massachusetts, a reduction in caries incidence of well over 50 per cent was obtained among school children by the morning and evening use of a dentifrice containing 500 units of potassium penicillin per gram of dentifrice. However, for the present, the American Dental Associa-

tion recommends that the use of penicillin dentifrices be strictly limited to professionally supervised use in rampant caries cases¹⁰.

VITAMIN K

Some work has been done on the use of vitamin K¹¹ (2-methyl-1, 4-naphthoquinone) incorporated in chewing gum as a caries preventive. This substance is known to be an enzyme inhibitor, affecting the action of some of the enzymes responsible for the degradation of sugar to lactic acid. This method is thought to be theoretically sound—if perhaps not entirely practicable. However, no satisfactory clinical evidence is available to show that caries can be prevented in this way.

ZINC CHLORIDE

During the last three or four years, much publicity has been given to what is claimed to be a caries preventive measure; zinc chloride is placed upon the teeth in carious areas and then precipitated by the use of potassium ferro-cyanide. It has been claimed that this procedure not only prevents decay but also arrests that which has already begun. However, the evidence which is available at this date is not regarded by most people in the caries research field as at all conclusive.¹²

NUTRITION

Nutrition must be considered when discussing caries preventive measures. It is of great importance in the formation of good tooth structure. There can be no doubt that poorly developed, hypoplastic enamel is more susceptible to acid action than that which is well formed. An investigation conducted in Norway before, during, and following World War II¹³ provided evidence indicating that good nutrition during pregnancy and lactation, and in the child up to the age of six has a significant bearing on the resistance of enamel to environmental factors causing caries. It is probably highly important beyond the age of six; but once calcification of the enamel is

complete it is not affected by nutritional factors, according to the best information available at present. The enamel of the 12-year molars is completely calcified by the ninth year in most cases. Any attempts to affect its composition by the use of vitamins, calcium, etc., after that time, are not likely to be of any use. However, the cementum, the pulp and the dentine are susceptible to nutritional changes for some time—and possibly throughout life. But the enamel is the important part as far as decay is concerned. After the eruption of the teeth the nature of the diet becomes a more important factor in this matter than nutrition. There is no evidence that any type of malnutrition can affect the enamel of an erupted tooth or render it more susceptible to decay.

SUMMARY

The quest for caries preventive measures has led thus far to five that are sufficiently well founded to warrant their use:

1. Adequate nutrition, with a view to developing good tooth structure.
2. Reduction in the frequency and amount of soluble carbohydrate consumption, with due regard to nutritional requirements.
3. An oral hygiene regime based on the knowledge that a caries activity period occurs immediately after eating sweets.
4. The topical application of sodium fluoride to the teeth, using the only technique which has been proven effective (that by Knutson).
5. The use of a penicillin dentifrice, under the supervision of a dentist, to check especially severe cases until they can be controlled by other means.

Even where all these precautions are exercised, some tooth decay must be

regarded as inevitable in the light of our present knowledge; therefore, regular visits to the dentist should be instituted at the age of three years and repeated at least every six months.

Dental health education no longer can be limited to the statement "see your dentist every six months". There are effective, economical ways to prevent and control dental disease. It is probable that research will reveal others in the near future. Only a well-informed public can make the best use of them.

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The most elusive of the vitamins is vitamin C—it is easily destroyed by cooking. Therefore, to ensure that satisfactory amounts of this vitamin are obtained, it is advisable to use good sources which can be served without cooking—citrus fruit juices, tomato juice and raw vegetables.—Health League of Canada.

OSTEITIS FIBROSA—Case Report

by J. STANLEY BAGNALL, D.D.S., F.R.S.R.C.S., Halifax, Nova Scotia

A five-year-old boy was admitted to hospital. He had been sent in with a diagnosis of osteomyelitis.

On clinical examination it was noted that there was a hard swelling on the left side of the mandible, in the canine area. While the swelling was not large, it was enough to give some bilateral asymmetry to this portion of his face. The enlarged bone could be palpated on the buccal aspect of the mandible and extended from the lower border of the ramus almost to the gingival margin of the teeth. It appeared to consist of hard, unyielding bone and there was no inflammation of the soft tissues. These tissues, as well as the adjoining teeth, appeared to be quite normal.

A number of attempts were made to secure good x-rays of the area, but the location of the lesion was such that no satisfactory pictures were obtained which would show the affected area clearly. An altered area of bone along the lower border was noted and the appearance somewhat resembled that of early osteomyelitis. It was my opinion that the case was not osteomyelitis because of the complete absence of any inflammation in the soft tissues. The same opinion was expressed independently by C. E. Kinley, M.D., C.M.; F.R.C.S.(C) who was in charge of the case.

It was difficult to obtain any satisfactory history as the parents and child had been impressed by the local practitioner with the idea that there was an area of "dead bone" which was causing the swelling. It was apparent that the enlargement had been noticeable for almost four months and that there had been some pain at intervals.

The decision was made to expose the bone by an incision along lower surface of the border of the mandible. We found an area of softened, disorganized bone along the lower border. This was somewhat oval in shape and meas-

ured about 1 inch by $\frac{1}{2}$ an inch at its widest point. In the deepest part it was about $\frac{3}{16}$ of an inch thick. This bone was easily scraped off the hard underlying bone, which appeared quite normal. The remaining soft and hard tissues of the area seemed quite normal in appearance, except the already mentioned slight enlargement of the bone above the affected portion and some change in the regular contour of the lower border, where this affected bone was removed.

The bone fragments were examined in the pathology department and were there diagnosed as "Osteitis Fibrosa." Very little can be found in the literature concerning this particular type of bone change. I have not found any reference in the dental periodical literature. It is only within the last few years that there seems to be a realization that this condition is a definite type of bone change and the present nomenclature gives this localized condition, which is unaccompanied by any inflammatory changes, the name "Fibrous dysplasia." However, recognized cases are so few that there is still not agreement on types. The particular case reported here is much earlier than other cases previously reported in the medical literature.

It is interesting to dentists that the cases so far reported have generally occurred in mandible or maxilla. It is also of interest in that the swelling appears quite similar clinically to other localized swellings of the maxillae. This case report is made in the hope that if other cases should be encountered some further contribution may be made about a condition concerning which there is, as yet, little known. The cause has not been established, nor does there appear to be much information as to subsequent history of these cases.

"WIDER PLEASE"*

by JOHN FISHER

IF you had a toothache a few days ago, I pity you, because your chances of getting into a dentist's office were pretty slim, because several hundred dentists from Newfoundland to the Yukon were here in Toronto. They came to share their mutual problems—to learn of the latest improvements and also to share 75 years of dental progress. I just listened and heard many a story. I heard about an Englishman by the name of Josselyn who visited America 300 years ago. He was particularly fascinated by the excellent teeth of the Indians. He wrote—"The Indians have very white teeth—short and even."

Josselyn's report on the teeth of the English settlers of that period wasn't as favourable. He said of the English—"The men and women keep their complexions, but lose their teeth: the women are pitifully tooth-shaken; whether through the coldness of the climate, or by sweetmeats."

Now, this was nearly three hundred years ago and one might suppose that after all this time we would know most of the answers about good and bad teeth. We do know how tremendously important good teeth are to our general health, to say nothing of our good appearance, and also our speech.

But, how much does the average person, the average Canadian, say, know about the care of his or her teeth. And how much do we know about the proper care of our children's teeth?

Well, my dentist friends think that most of us are appallingly ignorant, or else appallingly negligent, which is even worse. They are extremely worried about the whole matter. In fact, they're so worried that all across Canada, our Dental Associations are making a terrific effort to arouse public in-

terest in their problems. If they are to care for our teeth efficiently, they must have our help, and the way things are going these days, the faster they get that help, the better.

Well, our dentists have come up with a lot of the answers, and by the way, don't for one minute think that dentists are just a bunch of mechanics, patching up broken down teeth, at so much an hour.

Dentists are the least understood and appreciated of all our professional groups. Of course it isn't so easy to get acquainted, to discuss life and other weighty problems while we're sitting with our mouths open, terrified that something is going to hurt any minute, but . . .

Dentists, I find, are keenly interested in the whole general problem of public health, and as their share of the job they are out to sell the public of Canada on the idea of preventive dentistry—how to prevent dental trouble. They say that no matter how much patching up they do, they can't possibly solve the problem in this way—that only preventive measures will bring the whole situation under control.

What is the situation? Is it really very bad? Looking at the figures, we find that it is very bad indeed. It appears that 96 to 98 per cent of our Canadian population suffers from dental defects. That is, practically all of us are affected. And in a recent survey in Ontario, it was found that out of some 6,000 children examined by the public health officers of the Red Cross, only one out of every five had seen a dentist, and each child examined averaged five cavities. In United States, the American Dental Association has reported that dental decay among chil-

*Presented by Canadian Broadcasting Corporation, May 28, 1950.

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dren there is occurring six times faster than it can be taken care of.

All of which should be enough proof that our Canadian dentists aren't stirring up a tempest in a teapot—that the problem is very real.

It has been proved beyond doubt that excessive carbohydrates in the diet are one of the main causes of dental trouble. In the year 1839 only 18 pounds of sugar were consumed per person per annum, in North America. By 1949, this amount had risen to 138 pounds per person, per annum—so we have found one reason why dental disease is increasing all the time. An allied dentist, during his work in Italy in 1945, where only 17 pounds of sugar were being consumed yearly, per person, found that dental disease was one seventh that of a similar age group in the United States where the rate of sugar consumption was so much higher. The answer is that in North America we consume enormous quantities of sugar in bottled beverages, candy and chewing gum.

Boys and girls won't like this idea that sweets are bad for their teeth. Perhaps while they're still very young, they'd rather have their candy, pop, chocolate milk and chewing gum, than have good teeth, but when they become a little older, they'll thank the parents who put rigid controls on their diet. How many of us adults today wish that our parents had watched our diets more carefully when we were growing up—wish that we'd have eaten our whole wheat bread, fruit and vegetables, instead of so much cake and candy.

And while we're on the subject of diet, it seems that most of us haven't given enough thought to the proper preparation of the food we place before our children. So much of the food today is soft and mushy, and children are apt to become lazy in the chewing and masticating of their food. Try giving little George his portion of steak without cutting it for him. Let him pick it up and tear off each mouthful with his teeth. Society says no, of

course, but our dentists say yes. And a little spruce gum now and then will be good for George's jaws too. Spruce gum contains no sugar.

And now, about cleansing our teeth—and it's surprising too, how little we know about this subject. For instance, how many of us know that the acids which cause tooth decay are formed very rapidly, and are in greatest concentration five to twenty minutes after eating sugars and starches. So, one obvious way of preventing acid formations is to avoid eating sugars and sweets—sticking to plenty of fresh fruit and vegetables. But if we must eat sweets, cleansing the teeth before the acids can form is of great benefit. Perhaps one of the main reasons why mouth hygiene has failed in preventing tooth decay, lies in the fact that it isn't always convenient to cleanse the teeth immediately after meals. However, we're advised to do the best we can in this regard.

Now, on to another matter, also of major importance in preventive dentistry. Our dentists want to give us all a good lecture on the subject of baby teeth. It seems that much of our dental trouble in later years can be traced back to our baby teeth—premature loss of them—improper care of them.

If baby teeth are lost prematurely, it's apt to result in the space between them becoming shifted, or closing up. Which means that when the permanent teeth try to come in, they may be crowded or twisted. So, we must take good care of our children's baby teeth. Have them checked carefully at regular intervals, starting at three years, and we mustn't allow them to be lost prematurely, through decay. If they should be lost by accident, the family dentist will put a "space maintainer" into the vacuum to keep the mouth in shape until the permanent teeth arrive. Perhaps the little boy who lost his two front teeth would be disgusted with a "space maintainer," but in the long run, it would mean that everything would turn out all right.

Another serious problem of preventive dentistry is "thumb-sucking"—as practised by some of the darling infants in our homes. The dental profession is very antagonistic to certain psychologists who say that parents shouldn't attempt correction of thumb sucking until a child is three or four. It may be good psychology, but it's mighty poor dentistry.

The psychologists claim that an attempt to stop thumb sucking at an early age causes certain frustrations in the child, and dentists admit that this is probably true, but, Mr. and Mrs. Brown, compare the frustrations created by stopping the thumb sucking at age six months and the frustrations created at age twenty years by unsightly teeth.

This subject of preventive dentistry is most important today. Treatment is important, of course, but our dentists say they will never catch up with cases unless preventive dentistry methods are established in Canada. And it's high time our government, municipal bodies and people at large stop thinking of dentistry merely in terms of treatment—thinking of dentists as tooth pullers and patchers. It's time we got behind a progressive educational policy aimed at prevention. This will be much less expensive in the end, and much more effective in results.

Every community should have a dental public health officer. We must learn to link dental health with general health. We must not continue to isolate the mouth from the body. We need more money in our universities for dental research. We have it for eyes, ears, nose, heart, lung, liver, stomach and even for limbs. Why have we always neglected the diseases of the mouth and the science of dentistry? The reason seems to be that dentistry is not exciting. Blacksmiths used to pull teeth, but the point is that modern dentistry is a complex and very advanced science. We have not moved with it in our thinking. Dentistry has little public appeal because the doctors are too kind to us—they

can patch and arrange, substitute and improvise. Dentistry, although a science born out of training is also a profession of public relations. It has failed in the job of selling its importance to the public. The dentists have been so busy learning and so without funds that they have not convinced the public as have the nutritionists and physical culturists.

Modern dentistry is not richly endowed in our colleges because dental disease is not a killer and therefore lacks the drama of other diseases. Each day hundreds of people die in Canada. For each death the coroner or the medical officer makes out a death certificate. Rarely have you seen a certificate which attributed death to dental diseases. We know or should know that dental diseases contribute to death and could be the cause of many many illnesses, but because that old work tooth trouble is not on the death certificate, dentistry loses glamour. How wrong we are. How much you people of wealth could do for the health of society by leaving some of your money to dental research. Alone and without help the profession of dentistry has moved from patchers to preventors; from pullers to professionals. No wing of science has made more progress than the forgotten calling of dentistry.

Your dentist knows many of the answers. They can tell us the principle—we must do the practise. The dentist's viewpoint has changed tremendously in the past hundred years. A century ago the chief aim of dentistry was the relief of pain, the old-fashioned yanking of teeth, lancing of infections. . . . Today dentistry works for the prevention of mouth disease and oral decay. As one dentist so pithily put it—a dentist's real work is to eliminate the necessity for dentists. Now dentistry is concerned with the biological sciences and medicine generally. The only weak link is with the public. On the subject of health of the mouth the dentist is saying to our minds—open "WIDER PLEASE".

The Forum

MODERN MANAGEMENT OF THE COMMON COLD

by MARVIN ZIPORYN, M.D.

Senior Assistant Surgeon, USPHS Alameda, California

Summary of paper in Medical Times, May, 1950

The modern management of the common cold may be summarized as follows:

1. In patients where nasal symptoms are predominant and treatment is inaugurated within a reasonably early period after the first indication of onset, Chlor-Trimeton, an antihistaminic drug characterized by an almost total lack of unpleasant or dangerous side reactions, is the drug of choice. It should be given in doses of 2 milligrams every four hours. Marked improvement or total disappearance of symptomatology may be expected within 16 hours.

2. In cases where constitutional symptoms such as chills, fever, and myalgia predominate, or where treat-

ment has been deferred for over 24 hours, best results will be obtained by the use of Coricidin, a combination of Chlor-Trimeton plus analgesics. Coricidin is also effective in the milder cases, but the antipyretic and analgesic actions of APC (acetylsalicylic acid 3.5 gr., acetophenetidin 2.5 gr. and caffeine 0.5 gr.) are not required, Chlor-Trimeton alone being adequate.

3. In cases complicated by cough and laryngeal involvement, expectorant cough mixtures and steam inhalations should be utilized as adjuvants to the antihistaminic therapy, inasmuch as antihistaminic therapy alone is of little value when this group of symptoms of the common cold predominate.

THE ROLE OF MEDICAL GROUP PRACTICE IN THE CHANGING ORDER

by GEORGE MAEHR, M.D., Director of Clinical Research, Mt. Sinai Hospital, New York.

Condensed from Transactions & Studies of College of Phy. of Phila.

As a result of the preaching of our own profession, public education of the masses of our people is bringing to them an ever-widening appreciation of American medicine and what it has to offer in disease prevention and in the early recognition and treatment of illness at a stage when it can still be arrested. They are already seeking and will undoubtedly find the means for purchasing all the benefits of modern medicine for themselves and their families. The health and welfare funds of the United Mine Workers, amounting annually to \$60 million, and of the United Automobile Workers, which

will probably exceed \$100 million a year, are obvious examples of this urge, which is only beginning and will spread to all our people. We must, therefore, re-examine our present pattern of individualistic private practice remunerated by a fee for each medical service and determine whether it is capable of providing all the available benefits of preventive and curative medicine under the new order or whether some modification in methods of payment for medical care and in organization of our profession may not be necessary if our high standards are to be preserved and extended.

This nation is justifiably proud of its achievement in reducing morbidity and mortality, especially in the early years of life, whereby the average life expectancy of an American has been extended almost twenty years in the last half century. Now that few people die in the early years of life, the problem which will loom ever larger in the coming years will be concerned with the prevention and the prompt recognition of the earliest manifestations of the diseases of middle age. These preventive services must be provided largely by the medical profession, not by public health departments. Can the masses of the people with low incomes, the vast majority of the people of our country, obtain these benefits in adequate measure under our present system of medical practice?

The result of the inevitable multiplication of services is progressive pyramiding of costs, superficial performance because of excessive volume, and deterioration of the standards and ideals of medical practice. This was the carefully considered conclusion of the Committee on Medicine and the Changing Order of the New York Academy of Medicine after an exhaustive four-year study of the experiences of foreign compulsory plans and of voluntary medical insurance plans in this country.

The experience already available in this country has demonstrated the ability of physicians to render comprehensive medical services under voluntary prepayment plans when they are organized for medical group practice and are remunerated on a per capita basis. No one can dispute the advantages of group medicine as practised on the wards of our best hospitals. Private group practice of high quality on a fee-for-service basis is exemplified, of course, by the Mayo, the Lahey, and the Chicago University Clinics. There are hundreds of similar medical groups of this "referral" type which limit their care to patients with serious illness referred by private physicians. There are also several hundred private medical groups throughout the country

which provide comprehensive medical care to families, including services in their homes on a fee-for-service basis.

The declining status of the general practitioners in modern society has been much deplored in recent years; but no one has heretofore done anything about it, except preach. Under group practice in Health Insurance Plans, the general physician is an equal partner and his relative financial rewards approach those of the specialists. His contacts with his patients are as intimate as those of any solo practitioner and are, in fact, far less restricted because of the absence of a monetary barrier for each service. At his call he has the resources of the group with all its physical facilities and expert skills, ready to be drawn upon without the limitations which would, in ordinary private practice, be imposed by the patient's economic circumstances. Daily association with the senior members of the group and the hospitals with which they are identified provides a continuing educational experience. This is especially evident when the general practitioner sees his patients at the health centre. The young physicians who join a medical group need not "cool their heels" waiting for patients during the best years of their lives as do those who hang out a shingle and try to establish themselves in solo practice. Their time is fully occupied from the first day of their career with fruitful and edifying professional work.

Like specialists, the general physicians of the group have regular opportunities for adequate vacations without that constant fear of financial sacrifice and loss of practice which haunts most individual practitioners. Most evenings, Sundays, and holidays can be undisturbed, for they can alternate with associates. Equally important, they can, from time to time, afford to take sabbatical periods for special training in some chosen field so that they may become more valuable members of the group. In future years, when the groups have grown large

enough to have accumulated a sufficient reserve, it is hoped that they may be able to provide disability and retirement benefits for their members.

For the general physician it all adds up to greater professional satisfaction as well as economic security. It is my considered opinion that only by the association of general practitioners with specialists as equal partners in group practice can, in this modern world, the ancient dignity and importance of the general physician be restored and enhanced.

I have no illusion that medical service can be rendered exclusively by

medical groups under any prepayment plan, voluntary or governmental. Some segment of medical care will always continue to be rendered by individual physicians. The time has arrived when intelligent and progressive leaders in medicine should take the initiative and cooperate with one another in evolving local patterns of comprehensive medical care which will serve local needs for the whole panorama of preventive as well as curative medicine under prepayment plans, which are spreading and which will inevitably affect all of us and our institutions.

DISTORTION OF WAX PATTERNS AS INFLUENCED BY STORAGE TIME, STORAGE TEMPERATURE, AND TEMPERATURE OF WAX MANIPULATION

by RALPH W. PHILLIPS, B.S., Indianapolis, and
DONALD H. BIGGS, D.D.S., Evansville, Ind.

Summary of paper in J.A.D.A., July, 1950

Results of 436 individual castings indicate that if distortion of the wax pattern is to be prevented, the pattern must be invested immediately after removal from the preparation. Most of the distortion occurs during the first 2 or 3 hours of storage of the preparation and is often evident on some types of preparations within 30 minutes.

It was found that the higher the

temperature of the wax during manipulation, the less the internal strain and distortion upon storage. Distortion is accelerated as the storage temperature is increased. Patterns which have been moulded in wax at non-uniform temperature and subjected to patching and pooling display the maximum distortion. If storage of the pattern is necessary, a low temperature will reduce the degree of distortion.

GRINDING OF THE TEETH

Grinding of the teeth during sleep in childhood is in the category of habit disorders, particularly in the group of sleep disturbances which include insomnia, nightmares, night terrors and talking during sleep. Disturbed or restless sleep is common in infancy and childhood. Physical factors, such as hunger, digestive troubles, wet diapers or bed clothes and excessive cold or heat, may cause disturbed sleep. Psychologic factors, particularly tension and anxiety, may cause sleep disturbance, notably in children who are overactive and nervous in the

daytime. It would be well to make sure there are no tonsillar stumps remaining. Sometimes large adenoids predispose to teeth grinding. If these physical factors are ruled out, the home atmosphere should be investigated for sources of worry or insecurity. Overactivity should be eliminated. The child's general environment should be carefully studied, and any cause of insecurity, inferiority or tension state or other possible emotional stimulant in the environment, should be eliminated.—J.A.M.A. per Jour. D. Med. April 1950.

ANNOUNCEMENTS

MONTREAL DENTAL CLUB ANNUAL FALL CLINIC at Mount Royal Hotel October 18-20. The following subjects will be covered by specialists: "Office Management and Economics"; "Psychomatics in Dentistry"; "Partial Denture Service"; "Prevention of Periodontal Disturbances"; "Immediate Dentures".

Other Features: Daily Luncheons, Dinner Dance, Ladies' Entertainment.

M. L. Donigan, 1414 Drummond Street.

THE ANNUAL DINNER MEETING OF THE ACADEMY OF DENTISTRY, TORONTO, will be held at the Royal York Hotel on October 16. The speaker will be Mr. D. Leo Dolan, Director of the Canadian Travel Bureau. This is always a good meeting and dentists of Toronto and vicinity are urged to be on hand.

THE ANNUAL WINTER CLINIC of this association will be held at the Royal York Hotel on November 23. Dr. Gordon Frawley is in charge.

CONTINUATION COURSES FOR GRADUATES AT THE FACULTY OF DENTISTRY, UNIVERSITY OF TORONTO:

Orthodontics: (for the general practitioner): November 6-10, 1950. Enrolment limit 10.

Cephalometric Techniques (for specialists only): November 16, 17, 18, 1950. Enrolment limit 10.

Dental Public Health Conference: November 16, 17, 18, 1950. Enrolment limit 15.

Operative Dentistry: February 19-23, 1951. Enrolment limit 10.

Dental Radiology: February 26-March 2, 1951. Enrolment limit 12.

Endodontics: March 12-16, 1951. Enrolment limit 8.

Orthodontics (for the general practitioner): April 9-13, 1951. Enrolment limit 10.

Pedodontics: April 16, 17, 18, 1951. No enrolment limit.

Dental Oral Surgery and Anaesthesia: April 23-27, 1951. Enrolment limit 12.

Periodontics: April 30-May 4, 1951. Enrolment limit 14.

Those interested are asked to inquire respecting enrolment.

Please address inquiries to: The Dean, Faculty of Dentistry, University of Toronto, 230 College Street, Toronto, Ontario.

The 19TH ANNUAL POSTGRADUATE CLINIC OF THE DISTRICT OF COLUMBIA DENTAL SOCIETY will be held March 11-14, 1951, at the Shoreham Hotel, Washington, D.C.

A Clever Idea

The Michigan State Medical and Dental Societies have recently conducted a most impressive and novel campaign in focusing the attention of the public on the adverse treatment conditions imposed by Socialized Health Services. The idea is simple and striking.

The Society either sends an ordinary three minute egg timer to the member, or suggests that one be purchased, and placed on the desk, on the instrument table, etc., in view of the patients. When a patient is seated, the doctor upends the timer without explanation. At the end of three minutes when the sand has passed through the glass, and usually the examination is just under way, the doctor calls attention to the timer and remarks to the patient, that if they were in England, or if we had Socialized Health Services, the patient would be dismissed, since the three minute period had elapsed.

Not many patients will forget the point.

Texas Dental Journal, August, '50.

*"Life is short; Art is long;
Experience is difficult". — Hippocrates.*



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BRITISH COLUMBIA

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New Westminster

Editorial

SUGAR AND DENTAL CARIES

The torrent of scientific discovery marches on. Since the beginning of the century the expectation of life has increased for the male by 18½ years and for the female 20 years, and Dentistry has played its part in this accomplishment. However, Dentistry has not reached its zenith nor has it modified its aims of repairing broken down dental tissues, reconstructing deformed mouth conditions, and to prevent dental disease. Emphasis on function has led to a wider appreciation of the influence of psychological factors and that body and mind are very closely related. It has become apparent that basic sciences are fundamental to the ideal practice of our profession. The newly forged weapons of science are applied to Dentistry with incredible speed. No advance in fundamental science is without its influence on dental research and practice. Drugs have now been produced which greatly relieve the mind of the dentist in the face of serious infections. Man is not a robot. His various organs are so closely related that unless the basic dental teaching be directed to a study of the whole man, it will be misconceived and out of balance.

It is with these thoughts in mind that we approach the greatest problem in Dentistry today, namely, that of Dental Caries. Do we know what causes the disease? Is it caused chiefly by a local condition or a systemic condition? Some groups would say that we do not understand caries at all, while others would give an affirmative answer. More recently great stress has been placed upon the consumption of refined carbohydrates, particularly sugar. Is sugar the chief cause of Dental Caries? To answer this question the California State Dental Association, at its annual meeting last April,

arranged a symposium on "Sugar and Dental Caries". The group of outstanding scientists who took part in the symposium comprised Dean J. F. Volker of Alabama School of Dentistry; Paul Pincus, Research Worker, Medical Research Council of England; L. S. Fosdick, Professor of Chemistry, Northwestern University Dental School; Julian Boyd, Professor of Paediatrics, State University of Iowa; Reidar F. Sognnaes, Associate Professor of Dental Medicine, Harvard School of Dental Medicine; Hermann Becks, Professor of Dental Medicine and Chairman of the Dental Medicine Division of the University of California College of Dentistry; Robert C. Hockett, Scientific Director, Sugar Research Foundation; Michael Walsh, Instructor in Clinical Nutrition, University of California.

The papers and discussions have been printed in booklet form made possible by a contribution from The Sugar Research Foundation, a non-profit corporation formed to pursue scientific studies of sugar as a human food, as an ingredient of foods, or as an industrial raw material, and to disseminate factual information about sugar. The Foundation is supported by the producers, processors and refiners who supply more than 90% of all sugar marketed in the United States and Canada. This booklet is most informative and worthy of the careful perusal of all dentists. It is encouraging to learn that the food industries are showing profound interest in tooth decay and their responsibility to the dental profession in advancing knowledge.

One might have hoped that the participants in this Symposium would have reached an agreement, but such was not the case. There are so many facets to this problem that each line of attack seems to open up new fields for investigation. Contradictory facts arise which must be harmonized before the problem is solved.

Dr. Volker points out that it is not certain that lactobacilli are responsible for caries, yet their numbers roughly parallel the degree of caries which is found; that the rate of salivary flow and its neutralizing power can also be considered to play a part in caries reduction; that the surface of enamel can respond to external influences.

Dr. Pincus believes that the Miller theory does not explain the form of occlusal carious lesions since acid applied to occlusal surfaces of teeth dissolves the lateral walls of the cavity it creates instead of progressing downward as does true caries. He suggests that the teeth themselves contain the necessary substances to produce acid under bacterial attack, and that a continual supply of fresh glucose from the exterior is not necessary.

Dr. Fosdick pointed out that the addition of sugar to the primitive diet results in increased caries, while reduction of sugar in civilized diets causes a decrease in caries, that sugar is definitely responsible for the formation of acid on the surface of the tooth.

Dr. Boyd reported on a test carried out on 116 institutional girls whose diet was carefully controlled for a period of three years and found that the presence or absence of sugar in the diet did not noticeably affect the conditions for development or progress of caries.

Dr. Sognaes reported that animals fed diets very high in sugar content do not develop caries appreciably if they were fed natural diets during the time their teeth were developing and that if they received the purified high sugar diet during this time, then teeth do develop caries when the high sugar diet is continued in later life and therefore the structure of the teeth themselves is very important in determining the subsequent caries experience.

Dr. Becks was able to show that after one year on a reduced carbohydrate intake 62-85% of the rampant caries cases showed no new caries.

Dr. Hockett stated that sugars are the cheapest and most efficient sources of energy for animals; that the consumption of total carbohydrates for the United States is lower than in several other countries and has decreased in recent years; that no evidence has been found for the existence of any "protective" factor in naturally-occurring sugars, which may prevent caries.

Michael Walsh stated that refined sugar is physiologically harmful to humans in the quantities now consumed, and refutes the claims that sugar is an important food resource. He said that refined sugar, because it is highly concentrated and completely devoid of essential proteins, vitamins and minerals, is now regarded by nutritionists as a diluting agent of the modern diet and is one of the contributory factors to the ill being of much of the world's population. He pointed out that contending that "popular beverages" are comparable in sugar content and acidity with citrus fruits and would act similarly on the teeth is not in accord with the facts since citrus fruits contain calcium, phosphorus, iron and vitamins A, B1, B2, C and others in large quantities, while "popular beverages" do not.

A study of these papers indicated that there are two phases involved in dental caries, namely, the tooth and the attacking agent. Much evidence was presented to show that carbohydrate fermentation with resultant acid formation is an important factor in dental caries. However, evidence was also presented to show that acid may arise within the tooth itself as a result of chemical action by microorganisms on the constituents of tooth protein so there is good evidence that the structure of the tooth itself may play an important part in determining whether the tooth will subsequently resist the attack of microorganisms. The speakers agreed that acid was the criminal agent but were not agreed on the exact origin of the acid. It was shown that prenatal influence is a factor and this must be studied. Different opinions were expressed as to the importance of the lactobacillus. It was not decided that lactobacilli are the responsible agents.

To Henry M. Leicester, Ph.D., Professor of Biochemistry, College of Physicians and Surgeons was assigned the task of putting together everything that was said and tell exactly what caries is and what can be done about it, but this task was hardly possible. He stated that as a result of Dr. Sognaes' statements that much further research would have to be carried out to determine how much the influences of the things which have been studied in the past have come from prenatal influences and how much perhaps not.

Dr. Leicester points out that it is not enough to say, take sugar and you will get caries. The fact is, maybe you will or maybe you will not, and we do not know why we do or why we do not.

Dr. Leicester further sums up the present situation as revealed in this symposium and believed by the dentists in general, that in the majority of cases it is admitted that sugar certainly does have some role in the caries problem, that there seems to be no question but that you can reduce the amount of rampant caries involved by cutting down the consumption of excessive amounts of sugar.

Whatever may be the scientific explanation of dental caries, the fact still remains that dentists have found that those people who are susceptible to dental caries are greatly helped by curtailing the consumption of sugar.

M. H. G.

BOOK REVIEWS

"A Text-Book Of Orthodontia" by Robert H. W. Strang, M.D., D.D.S., Director of Courses in Orthodontia in the extension teaching department of Temple University; Director of the Fones School of Dental Hygiene, University of Bridgeport; Co-editor of "The Angle Orthodontist". Third Edition, revised, 825 pages, with 1050 illustrations on 583 Figures and 5 Plates, some in colour. Published by The Macmillan Company of Canada 70 Bond Street, Toronto. Price \$18.00.

This book is divided into two sections, not by the author but by the reviewer. Chapters one to sixteen deal with the basic concepts of orthodontia, the occlusion of the teeth both normal and abnormal, the factors of influence in evolving and maintaining normal occlusion, the aetiology of malocclusion, histology of the dental tissues both normal and during tooth movement and detailed case analysis. Chapters seventeen to thirty-four contain a comprehensive description of the Angle edgewise mechanism and the philosophy of treatment dictating its use. This section includes detailed descriptions of appliance construction from the very simplest procedures to the most complex.

Every dentist whether or not he carries out orthodontic procedures in his practice will benefit from the first section. To the orthodontist using the edgewise mechanism, the second section is a handbook describing every step necessary in its construction and use. Inasmuch as the author is firmly of the opinion that the edgewise mechanism is super-

ior to all others in the treatment of malocclusion, no technical instruction associated with the use of other methods of treatment is included.

In many respects the volume is a compilation of work done by some of the foremost men in the specialty of orthodontia and the author gives full credit and acknowledgement to their genius.

This book is most complete and practical and should prove helpful to dentists generally and to orthodontists especially. JOHN ABRA

Movable-Removable Bridgework by John Oppie McCall, D.D.S., F.A.C.D., F.A.A.P. Former Instructor of Periodontia, University of Buffalo. Former Professor of Periodontia, New York University. Former Director, the Murry and Leonie Guggenheim Dental Clinic, New York, and Isadore M. Hugel, D.D.S., Associate in practice and teaching with the late Herman E. S. Chayes. Former Instructor in Crown and Bridgework, New York University. 221 pages. Published by Dental Items of Interest Publishing Co. Inc., Brooklyn, New York. Price \$7.50.

This book is essentially a discussion of precision bridgework as developed by Dr. Herman E. S. Chayes. Many of the chapters include papers which were given by Dr. Chayes during his lifetime. It is interesting that the senior author, Dr. McCall should be a man whose specialty has been periodontia and the reader has the benefit of his opinion from that standpoint. The junior author, Dr.

Hugel, was associated with Dr. Chayes in practice and teaching. Part one of the book gives much of the history of bridgework and the pros and cons of fixed bridgework and removable work. A very good case is made out for the "movable-removable bridgework" as taught by Chayes. Chapter six is an article by Bodecker on the "physiologic movement of teeth" and is most helpful in evaluating principles. Part two consists of more of Chayes technical writing dealing with the principles and detailed construction of many attachments. One chapter deals with the "evils of fixed bridgework". Part three discusses examination, planning, preparation of cavities, building and inserting a movable-removable bridge as developed by Dr. Chayes. Your reviewer cannot but feel, in spite of the discussions in the book, that there is still a great place in the average general practice for the fixed bridge if proper principles are followed. Nevertheless there is much to be gained from a careful study of this book for those engaged in producing fixed dental restorations as well as the movable-removable type.

K. M. JOHNSON

Prescriptions Writing and Materia

Medica for Dentists by L. RICHARD CIPES, PH.G., D.D.S., New York City. Formerly Instructor in Oral Surgery, New York University College of Dentistry. Third enlarged edition. 525 pages. Pub-

lished by the Dental Items of Interest Publishing Co., Brooklyn, New York. Price \$8.50.

This book presents a compact, comprehensive reference work on prescription writing for dentists, a book that covers in complete detail every vital aspect of this essential phase of modern dentistry. Among other things, it contains the latest reports on the antibiotics, penicillin, streptomycin and aureo mycin.

A valuable addition has been made by the inclusion of the latest methods of prescribing for:—Avitaminosis; Caries Prevention; Post-extraction Infection and Premedication for Subacute Bacterial Endocarditis.

The following subjects are covered: Basic Principles of Materia Medica and Pharmacology; Drugs Acting Locally on the Skin and Mucous Membranes; Antiseptics, Disinfectants and Germicides; the Sulphonamide Drugs; Dental Materia Medica and Therapeutics, Penicillin, Gramacidin, Streptomycin, Tyrothricin and other Antibiotics; The Vitamins; Drugs affecting the Central Nervous System; Drugs Affecting the Blood; Methods of Prescription Writing, and Dental Remedies and Formulas for mouth washes, dentifrices, tooth pastes and powders, etc.

This book should prove valuable to the dentist as well as the dental students.

M. H. G.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Massachusetts Enabling Act for Training of Dental Nurses Repealed: Last year the legislature of the Commonwealth of Massachusetts amended its dental practice act to permit the training of feminine personnel to fill cavities in children's teeth under the supervision of a dentist in dispensaries or clinics. Arrangements for a two-year training course were initiated to be given at the Forsyth Dental Infirmary in Boston. The project was to be financed by the Children's Bureau of the Federal Security Agency at Washington.

The change in the Act and the initiation of the training program occurred without consultation with organized dentistry. At the meeting of the American Dental Association last October a strong

resolution was passed condemning the action of the Massachusetts Legislature. The resolution reads as follows:

"Resolved that the American Dental Association deplores the apparent failure of the Massachusetts State Legislature to approach the Massachusetts State Dental Society preparatory to inaugurating this program without the knowledge and the endorsement of the American Dental Association, and be it further

Resolved, that all such programs concerning the development of sub-level personnel, whether designed for experimental purposes or otherwise, should be planned and developed only with the knowledge, consent and cooperation of the respective state associations and the American Dental Association for the

purpose of protecting public health and welfare."

During the intervening months this project has aroused considerable interest both in the United States and also among health authorities in other countries, including Canada. Suggestion has been made that a similar "experimental research" project might be undertaken in Canada.

The project in Massachusetts was condemned by the Massachusetts State Dental Society and several other dental organizations in the United States. The Massachusetts Legislature, at its recent session, repealed the law authorizing the training of dental nurses for the purpose of preparing and filling teeth and the Governor has signed the repeal measure. The Forsyth project was put into operation last July. According to information received, officials of the Forsyth Infirmary are considering plans for the termination of the project.

Survey of Dental Schools: Over a period of years the Council on Dental Education has made preparatory plans directed toward making a survey of Canadian Dental Schools. Preliminary work setting forth certain standards was completed in 1948. Under the title "Requirements for the Approval of a Dental School," these requirements were published and distributed to the dental schools and also educational institutions preparing students to enter the dental course. The last paragraph of this publication reads as follows:

"the course of procedure to be followed by the Council is to allow an interval of sufficient time to elapse after the distribution of this pamphlet in order that the authorities concerned may have opportunity to make any indicated changes which may be deemed necessary. After which, at a time decided upon, the Council will be prepared to visit dental schools, when requested, for the purpose of accreditation."

During the forthcoming academic year it is now proposed to make initial survey of the schools. The survey team for the purpose has been appointed and consists of Dr. Harvey W. Reid, Toronto, Dr. A. L. Walsh, Montreal, and Dean A. C. Lewis, College of Education, Toronto. Doctors Reid and Walsh are both members of the Council on Dental Education and have had extensive experience in matters relating to dental education. Dr. Lewis is a recognized leader in the field of general education, who has had experience in survey work.

It is planned to make the survey a continuing one and the first three years' activities have been outlined. Assistance

for the survey has been granted by the Kellogg Foundation on a sharing basis with the C.D.A.

Through the accreditation of Canadian Dental Schools the Council hopes to be of assistance to the schools and the authorities governing them through the issuance of reports from time to time. The chief aim of the survey work is directed toward the improvement of dental education. The Council desires to be helpful in attaining a high degree of excellence in the training of dental students and wishes to cooperate with the responsible agencies.

Newfoundland Appoints Governor: Notification has been received that the Newfoundland Dental Association has officially appointed Dr. E. P. Kavanagh of St. John's, as member to the Board of Governors. Unofficially, Dr. Kavanagh attended the last meeting of the Board of Governors which was held previous to the acceptance of the application of the Newfoundland Dental Association as a Corporate Member of the Association.

Dr. G. E. Mallam, St. John's, has been appointed **Associate Editor of the Journal** for Newfoundland.

Wide distribution of the pamphlet entitled "**A Charter for Dental Health**" has been made to health authorities. Many commendatory letters have been received from health officials.

The content of the pamphlet was prepared by the Health Insurance Studies Committee and states in simplified language the policy of the Association on dental health planning. The subject matter is constructive and easily understood by the public at large. The committee is anxious that the information contained be read by as large an audience as possible.

A single copy was mailed out to the membership. Additional copies will be supplied on request for use in waiting rooms or to be distributed to interested parties.

Although dental experts advise teeth examinations at least once a year, a **nation-wide survey in the U.S.A.** shows that almost one adult in every two, or more than 45,000,000 people, have not been to a dentist within the last two years, and some 30,000,000 of these have not been in over four years.

About 4,000,000 of these adults have NEVER been to the dentist, the survey indicates.

This survey on the frequency of visits to the doctor and dentist was conducted from coast to coast by the American Institute of Public Opinion, whose trained

interviewers questioned a carefully constructed cross-section of the U.S. population.

The estimated total U.S. population over 21 years of age, is approximately 96,000,000 persons.

NEWS FROM THE PROVINCES

BRITISH COLUMBIA

A keen interest in modern developments was in the minds of the program committee of the **Vancouver and District Dental Society** when they planned the first program for the fall session.

Doctor Douglas Campbell, from California, was selected to present the subject of Psycho-Somatic Medicine, and its relation to Dentistry. Also on the program was a showing of the S. S. White film on Air Abrasive developments.

The Society is planning a fall and winter program of outstanding leaders, as usual, and it is believed that, as in previous years, afternoon and evening sessions will be held in most cases. This plan has proved popular in the past, since it gives members who are particularly interested in the subject an opportunity for a much closer and more detailed study, with a smaller group, and often results in a free for all question period and discussion that makes attendance well worth while.

Doctor Clay Hallman assumes leadership of the Society with the first meeting of the fall, and with a strong and enthusiastic executive committee working with him, the organization may be assured of a series of well planned educational and entertaining programs.

British Columbia joins with the other Provinces in welcoming to the Canadian Dental Association our tenth Province—**Newfoundland**. She should derive much benefit from her membership in the Association, and will, no doubt, be better able to contribute her share to the welfare of our profession in the Dominion.

Newfoundland will have much in common with the other provinces that border on the Pacific or the Atlantic oceans. In the planning of Dental Public Health programs and services, little attention has been given to **isolated coastal settlements**. Now that such programs are being developed throughout Canada, these areas must not be forgotten.

Many large settlements exist on the British Columbia coast line—settlements that are seldom, if ever, served by any normal transportation services. An example is an Island a few miles west of the British Columbia mainland, not on any regular transportation line served

In general the study showed a higher proportion of women than men visiting a doctor or dentist within recent months. Nearly one-third of all women questioned said they had gone to a doctor within the last month, as compared to only one-fifth of the men.

by large ships, which has a population of nearly a thousand people. Three schools are to be found, in various parts of the comparatively small island, with a full quota of children. Within a very few miles, on other nearby islands, are communities of permanent families that would easily raise the population of this centre to two or three thousand people. This, and many other similar centres receive no attention in the planning of Dental Public Health services. Perhaps the provinces that are faced with such problems might well compare their difficulties, and the methods that have been considered or tried, to bring relief to these unfortunate and deserving people. On our British Columbia coast, most of these settlements are populated by people who are gainfully employed, at fishing, logging, and other such occupations, and a free dental service is not required. It is hoped that, in the near future, the health services of the Provincial Government may find it possible to arrange for regular visits to the many isolated communities on its coastline, by a well equipped dental boat.

ALBERTA

Mottled Enamel in Alberta:—A. Somerville, B.A., M.D., D.P.H. of Edmonton, Alberta, reported in the August issue of the Canadian Medical Assoc. *Journal*, that the deep wells in Alberta (120 feet or more) frequently carried excess fluorine while the shallow wells of less than 70 feet contained little or no fluorine.

Of the 79 wells within the Foothills Health Unit that were tested and showed a fluorine content in excess of one part per million, there were 29 wells with fluorine between 1 and 2 p.p.m., 10 between 2 and 3 p.p.m., 9 between 3 and 4 p.p.m., 14 between 4 and 5 p.p.m., 10 between 5 and 6 p.p.m., while 7 wells had 6 p.p.m. or more. The highest rate recorded was 6.4 p.p.m. There was a sharp line at 1 p.p.m. below which mottling of enamel did not seem to result.

While the marking on the teeth was a very obvious feature and was a very serious social problem at times, there did not seem to be any evidence of other bodily damage from this excess fluorine.

The **National Cadet Camp at Banff** Alberta was supplied with dental services by a dental officer from No. 3 Dental Coy. of Edmonton, Alberta.

Major George Page accompanied by Sgt. Dunn spent three weeks at this camp and while there examined and charted each cadet besides giving any emergency treatment that was necessary.

Interesting statistics were obtained with respect to dental caries, restorations and missing teeth from both an "Age Group" and "Geographical" basis. The latter was very interesting since there were representatives from every province of Canada and also Newfoundland. This information was turned over to Army Headquarters.

Lectures on Oral hygiene were given to the cadets in groups of 30, and the carrying out, with complete dental kit in evidence, of actual dental services under field conditions was demonstrated.

Strange as it may seem, much interest in the lectures was demonstrated by the boys, and many questions were asked in the Question Periods at the end of each lecture. When the camp closed each cadet was given a complete chart of his oral condition for his own information.

As part of a program to provide better health services for Indians, a dentist, Dr. C. H. Carley of Lloydminster, Sask., has been appointed to **Work Among The Indians Of Alberta**. This appointment brings to seven the number of full-time dentists in Indian Health Services.

Dr. Carley will work under the direction of Dr. E. L. Stone, regional superintendent of Indian Health Services for Alberta. When not working on the reserves, he will provide dental services for the patients of the Charles Camsell Indian Hospital, Edmonton.

On August 17 the **monthly golf game of the Edmonton and District Dental Society** was held at the Country Club. There were about 50 members present.

After a hard afternoon's work the following prizes were given out at dinner: Low 18 holes, Mr. Stephens. Low 9, tie, Dr. T. Nikiforuk, Mr. F. Cleal. High Score, Mr. Bill Jarvis. Dr. Wilkinson won a special prize for obtaining a birdie. Dr. E. Galbraith, for accumulating an excessive number of strokes on one hole was also awarded a special prize. Dr. George Decker for being the best dressed golfer (in his own imagination) was awarded an appropriate prize.

After dinner Sam Coultis, Vice-President of the Inter-Provincial Pipe Line

Company gave a very interesting address on the building of the pipe line from the Edmonton Oil Fields to the Great Lakes. He described the difficulties, ways, and means of putting the pipe line down and stated that up to date they had 748 miles underground.

W. E. A.

SASKATCHEWAN

Dr. V. Rondeau of Rouleau, attracted enthusiastic crowds at this year's **Fine Arts Exhibition** in Regina. Children were especially interested in the display of prehistoric bones, sea shells, birds' nests, moths and butterflies, and particularly the Hercules beetle. One mammoth molar weighing seven pounds was found in a gravel pit at Katepwa. The bones are said to be 30,000 years old (Figs. 1 and 2).



Fig. 1—The long nest is a hang bird's nest from the British West Indies. Next to the bird-house is a weaver bird's nest from India. At the upper right corner is a weaver bird's nest from Africa.

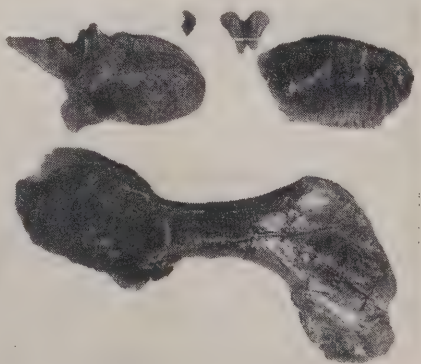


Fig. 2—Bones of a Mammoth found at Katepwa, Saskatchewan.

Dr. Rondeau also exhibited a number of his own paintings, one of the most noteworthy being a portrait of "Vida" the lead dog in the Scott expedition to the Antarctic.

ONTARIO

CONVENTIONS

The Northern Ontario Dental Association meeting was held on September 9 in Sudbury. Out-of-town members and guests arriving the evening before were tendered a reception at the Coulson Hotel thus creating an atmosphere of Northern hospitality.

The convention was held in Sudbury's Legion Memorial Hall which provided very fine accommodation. After the usual registration the genial President, Dr. Vivian Fournier called the 10th annual conclave together and got proceedings underway. Dr. Robert E. Moyers and Dr. Gordon W. Johnston, both of Toronto, were guest speakers for the program: Dr. Moyers lectured at morning and afternoon sessions dealing with practical preventive orthodontics and Dr. Johnson gave a fine demonstration clinic on the manipulation and technique of using amalgam alloy as a filling material.

During the luncheon period Dr. R. P. Lowery, President of the Canadian Dental Association; Dr. W. W. Breslin of the University of Toronto Dental Alumni, Dr. D. L. McKerracher, President of the Ontario Dental Association, and others spoke briefly.

In the evening the usual President's banquet and dance was held in the main lounge of the Hall. This is always a gala affair and this year was no exception. All day the members had been concentrating very hard on the scientific and business program; their ladies too had a strenuous day visiting and shopping and partying. So when evening came everyone was ready for fun and our Northern Ontario friends really know how to play and enjoy themselves as one big happy family.

The planning and arrangements for the whole convention were made by a very active committee. When members and visitors were handed their program a look of amazement came over their faces. It was a smart looking, well prepared booklet containing a lot of information, good advertising and the agenda for the meeting. The committee in charge of preparing the booklet deserve commendation.

The new President is Dr. I. T. Brill of Timmins, and it was decided the Convention goes to this northern city on the first Saturday after Labour Day in 1951.

The Eastern Ontario Dental Association meeting was held at the Chateau Laurier Hotel in Ottawa on September 18 and 19. Many visitors and members from out of town arrived the day previous; some for a game of golf, others a day's fishing but by evening all were on hand with their ladies and friends for the reception and musicale by the Studio Singers. As usual this was an evening of sociability and good music.

The Convention was officially opened at the Monday luncheon by President Dr. Irv. Calder of Brockville. This luncheon is always a happy affair because the ladies are present to add charm and atmosphere. The principal speaker after luncheon was Dr. Mac Odum, President of Carleton College, Ottawa. His message was a fitting preface for the proceedings of a professional meeting. In his opening sentences he said, "Professional people value nothing more highly than their professional status—guard those things then that mark you as a professional man." As the speaker developed his theme he recalled from history the contribution ancient civilization had made in the world. He referred to the achievements of skilled workers who built the Pyramids of Egypt and moved them to their places from the quarry. All done with very primitive tools and equipment and yet they produced masterpieces of detail and care because perfection was the motive of the craftsmen.

"In the elder days of art,
Builders wrought with greatest care
Each minute and unseen part;
For the gods saw everywhere."

The speaker suggested that the quality of service in these days would be better if everyone worked to improve because of the motivation, "The gods see everywhere."

"It is easy to deceive; easy not to do our best, but," he warned, "the elusive material things that men are groping for today, not blindly but pathetically, are not a part of true professionalism. The hall mark of a professional man is the dedication of his services to the benefit of mankind. You cannot be a truly professional person without this conviction in your heart. In this 20th century we seem to have lost something—a place for the deposit of our loyalties. There is a great need," he concluded, "of fixing, for ourselves personally, our own purposes and the motivation of our services, to a higher power and there invest our loyalty."

Such was the thought-provoking message that challenged convention delegates in their first assembly of the meeting.

The scientific program for the meeting followed the usual pattern. The lec-

tures and clinics presented were progressive and informative. Outstanding were the papers presented by Major T. L. Marsh and Major I. A. L. Miller of the Royal Canadian Dental Corps School. Highly instructive were the demonstration lectures by Dr. Modjeski of Richmond, Virginia, and the scholarly address by Mr. Denton Smith from the National Bureau of Standards, Washington. And as a finale to the meeting Dr. R. P. Lowery of Toronto spoke on dental public health.

The Convention delegates however had their periods of sociability and fun. A buffet dinner and dance was held Monday evening in the Assembly Hall at Lansdowne Park. It was a delightful party — good music, good food and good fellowship made spritely by such good fellows as Drs. Pritchard, "Dewey" McKerracher, Paul Coté and others. Then of course the grand finale banquet with plenty of entertainment topped off by a good speaker in the person of Mr. W. D. T. Atkinson, Principal of Glebe College. This speaker is an old favourite to audiences everywhere. And so another Convention was brought to a successful conclusion.

The University of Toronto Dental Alumni has 1200 members from a total of 3600 living graduates according to a statement made by Dr. W. W. Breslin, president of the dental group. Dr. Breslin journeyed to both the Northern and Eastern Ontario conventions to carry greetings from the Alumni. Dr. Breslin further stated that dentistry has a greater percentage of Alumni members than any other faculty group.

Dr. Breslin said that the Alumni Association embraces graduates everywhere but does not compete with any organization such as the Canadian Dental Association, or the Provincial and local societies. "It is our purpose," he said, "to enlist every graduate so that the grand total will impress those in authority at the University who control the purse strings and one day we may have a new dental building."

The aim this year is to obtain one dollar per graduate to set up 18 scholarships of \$200.00 each. We want the profession really interested in the Alumni too so that eventually we may have a dentist appointed to the Board of Governors.

It is such enthusiasm as shown by Dr. Breslin and his alumni executive that makes the organization forge ahead Good luck to them.

QUEBEC

The Secretary of **The Mount Royal Dental Society**, Dr. D. T. Shizgall announces a partial list of the program for the 1950-1951 season. The first three full day sessions will be on Periodontoclasia presented by D. P. Mowry, Dean, Faculty of Dentistry, McGill University, to be divided as follows:

Nov. 10:—Scaling.

Nov. 24:—Equilibration of Occlusion.

Dec. 15:—The Surgical Removal of the Pyorrhetic Pocket.

The other full day sessions will be as follows:

Feb. 16:—Operative Dentistry, by Prof. P. G. Anderson, Prof. of Operative Dentistry, University of Toronto.

March :—To be announced.

Apr. 13:—Crown and Bridge, by Dr. J. R. Schwartz, N.Y.

Among the speakers for the regular monthly evening meetings will be Dr. J. W. Abraham, who will speak on Office Management.

The regular monthly meetings and study groups will commence during the month of October.

The Director of the Annual Fall Clinic of **The Montreal Dental Club**, Dr. M. L. Donigan, announces that plans are practically completed for the 1950 clinic to be held October 18 to 20 at the Mount Royal Hotel. The program, designed particularly for the practising dentist, covers practically all phases of dentistry, in the form of clinics, essays and table clinics. Daily luncheons will be held with speakers and the main feature on the entertainment side will be a dinner dance: Entertainment for visiting ladies will be in the form of a tea and fashion show and a reception to be held at the Montreal Botanical Gardens.

Chairmen of the various committees under Dr. Donigan are: Registered Clinics, Dr. T. I. Guilboard: Table Clinics, Dr. A. Cameron: Local Arrangements, Dr. J. McCutcheon: Visual Education, Dr. R. Edmison: Registration, Dr. F. O. Frederick: Publicity, Dr. A. Donohue: Entertainment, Dr. C. R. Selser: Ladies, Mrs. S. A. MacSween.

Stomach enemy No. 1 is over-fatigue. Hurry and fuss at the beginning of the day can upset the stomach. Persons returning from work very tired should drink a glass of water and lie down for about 20 minutes before their evening meal.—Health League of Canada.

BRITISH COMMONWEALTH NEWS

GREAT BRITAIN

Remuneration.—The Editor of the British Dental Journal states in the August 4 edition that "a scale of fees, or a fixed capitation rate, cannot operate with complete justice between one practitioner and another. The most that can be expected of it is that it should give a fair overall remuneration to the profession which, without being extravagantly generous at the expense of the taxpayer, should yet yield an adequate return to the careful conscientious practitioner, working for a reasonable number of hours in the week. The whole picture of dental remuneration has been distorted as a result of the long hours of overtime which many practitioners have felt compelled to work in an endeavour to cope with the demands of the public and, to a lesser extent, by the readiness of some few practitioners to apply methods of mass production to the production of what should be individual appliances designed for each separate case. Before a satisfactory settlement can be reached there will need to be a careful review of all the factors affecting the scale or, alternatively, a complete recasting of the method of remuneration."

B.M.A. Annual Meeting.—Frustration, as the Lancet has stressed, was probably the predominant note of the annual meeting of the British Medical Association last month. The sequel to frustration is either apathy or revolt, and if one were to be bold enough to prognosticate in such matters, the impression is that apathy was already becoming apparent.—*Canad. M.A. Jour.*

SOUTH AFRICA

Dental Fees.—At a recent meeting of Federal Council the following resolution was passed:—"This meeting of Federal Council considers that as far as possible the fees for basic dental health services should not be increased, but appreciates that in certain types of treatment the fees require revision. In addition, the existing schedule of fees should be itemized more carefully in order to cover as many types of dental treatment as possible."

It must not be thought that the relevant motion was summarily arrived at. It was given profound consideration and reached its final form only after careful deliberation.

The trend of the debate was to the effect that we, as a professional group intimately associated with the physical and mental well-being of our fellow men, should play our part in the attempt to put an end to the present inflationary cost-of-living spiral and in this way make a material contribution in the interests of public health. The expression of this high ideal by men drawn from all over the Union and representing all types of practice speaks well for the profession.—*Jour. of D. Assoc. of S. Africa.*

Unemployment Insurance.—At a meeting of the Federal Council it was agreed that an approach be made to the Minister of Labour by the Executive Committee with a view to exemption from paying unemployment insurance in regard to nurses.—*Jour. of D. Assoc. of S. Africa.*

GENERAL NEWS

The following is a list of the candidates who successfully passed the August 7 to 12 **Examination of The Dental Council of Canada:** Carmichael, David John; Darcy, James M.; Peters, David Kendall; Rybak, John James; Smith, Edward Fraser; Staniloff, Coleman Kenneth; Syzek, Henry E.

Bill Calls For Dentist Registration Up To Age 65: The so-called Gurney bill (S.4029), which would require the registration of all dentists and physicians up to age 45 in the U.S.A. and would permit the immediate draft of professional men trained at government expense or deferred during World War II to complete their professional educa-

tions, has the approval of the American Dental Association.

National Health Insurance.—A new nation-wide advertising campaign against socialized medicine will be inaugurated by the American Medical Association in October, it was announced June 26 at the first meeting of the AMA's House of Delegates. The campaign will be carried in more than 11,000 daily and weekly newspapers; on 300 radio stations, and 30 of the country's leading magazines. Dr. Elmer L. Henderson reported 90,000 American doctors now are actively campaigning against socialized medicine and advocates of medical socialization.

Of the new campaign, San Francisco's Clem Whitaker, director of the AMA's advertising program, said that during October the organization will spend \$1,100,000 for radio and newspaper space. During one week in October, he said, newspapers will carry a five-column advertisement, boosting voluntary health insurance programs and opposing socialized medicine. Whitaker said that at present some 70,000,000 Americans carry some form of health protection and the AMA is hopeful that within three years the total will increase to 90,000,000.—San Francisco Chronicle.

Control of Dental Caries By the Addition of Fluorides to Public Water Supplies.—Dr. Francis A. Bull of Madison, Wis., reports in the August issue of the *Journal of the American Dental Assoc.* that:

1. Natural fluorides in a public water supply prevent about two thirds of the incidence of dental caries in those consuming a constant supply of the fluoridated water.

2. The fluoride ion which has been added to water acts in exactly the same manner to protect the teeth against dental caries as does the natural fluoride ion in water.

3. The artificial addition of fluorides to a public water supply is a simple engineering problem and can easily be controlled to one tenth of one ppm. The approximate cost of fluoridating a public water supply is 10 cents per capita annually.

4. Following 44 months of fluoridization of the public water supply at Sheboygan, Wisconsin, the incidence of dental decay was reduced to 39.6 per cent in deciduous teeth, 24.4 per cent in permanent teeth in the 9 to 10 year age group and 18 per cent in the 12 to 14 year age group. Brantford, Ontario, Newburgh, New York, and Marshall, Texas, are showing similar reductions in decay rates following fluoridization of their public water supplies.

5. The evidence is now sufficiently conclusive that the recommendation should be made that all public water supplies deficient in fluorides should have their fluoride content increased to approximately 1 ppm. immediately.

6. The Wisconsin State Dental Society and the Wisconsin State Board of Health have recommended a program of water fluoridization since 1945.

7. Eighty per cent of the urban population in Wisconsin has adopted this program.

8. A program of dental health education is still needed in communities adopting a fluoridization program.

The Failure of Ammonium Ions to Inhibit the Growth of Oral Lactobacilli.

Drs. W. F. Kirchheimer and H. C. Douglas of the Department of Microbiology, University of Washington School of Medicine, Seattle, Wash. report in the June issue of the *Jour. of D. Research* that their results concerning the effect of ammonium ions on the growth of lactobacilli from the oral cavity are markedly different from those obtained by Kesel, O'Donnell, Kirch, and Wach, who found that low concentrations of ammonium carbonate or ammonium phosphate possessed pronounced bactericidal properties toward these organisms. They state that as one might have predicted from a knowledge of bacterial nutrition, their results show that ammonium salts added to culture media in concentrations of 0.25 to 0.5 per cent produce no inhibition of the growth of the strains of lactobacilli tested.

Their *in vitro* findings obviously do not support the concept that ammonium ions as such, whether normally present in saliva or added artificially, are an important factor in preventing the growth of lactobacilli in the oral cavity, although they have not confirmed this *in vivo*.

The effectiveness of dentifrices containing ammonium ions as caries prophylactics must of course be determined by extensive clinical trials. Should these new dentifrices prove to be effective in controlling dental caries, it is of great practical as well as theoretical importance that their mechanisms of action be elucidated. It is their opinion that any effectiveness that these materials may subsequently be shown to possess must be explained on some basis other than inhibition of lactobacilli by ammonium ions.

Survey of the Use of Radioactive Isotopes in Dentistry.

—Dr. H. J. Bartelstone, of New York City, states in the September issue of the *N.Y. Journal of Dentistry* that in the light of the evidence presented, there is no longer any doubt that the enamel, dentine, and cementum are in contact with the systemic circulation through the media of the extra cellular fluid and the saliva, and that the internal environment of the tooth may be influenced by systemic factors. While these researches are in basic problems and will remain so for some time, we may be optimistic at this point with regard to the ultimate solution of many perplexing problems through the use of radioactive isotopes.

Virginia recently became the 46th State to license **Dental Hygienists** when the legislature passed a law au-

thorizing them to practice. The District of Columbia also licenses hygienists. Texas and New Mexico are the only States which have made no statutory provisions for hygienists. Thirty-six States and the District of Columbia now permit hygienists to give sodium fluoride treatments. Six States prohibit hygienists from making topical applications of sodium fluoride solution, and five others have laws which are indefinite. Thirty-five States, the District of Columbia, and four United States Territories are co-operating with the United States Public Health Service in the use of the sodium fluoride demonstration teams.—*Jour. Mich. State D. Soc.*, Aug. 1950.

Medical practice in New York City and over the country is rapidly being streamlined by increasing acceptance of the principle of **group practice**, in which a panel of specialists combine their skills to arrive at a diagnosis and begin treatment. Dr. Willard C. Rappleye reported June 2. The dean of the College of Physicians and Surgeons of Columbia University said group practice clinics were springing up everywhere.

In some professional circles it is held that group practice, if widely extended, might be the best way to meet increasing public demand for more efficient and cheaper medical care. The Federal Administration has called for passage of a pay-roll tax-supported national health insurance program. Opposing it, the American Medical Association has advocated extension of existing voluntary health insurance programs. The group practice principle, which might be viewed as a compromise or might be utilized under either tax-supported or voluntary insurance plans, has been thoroughly tested and is strongly approved by the Columbia University medical college.

It is ridiculous to assume that any one doctor can be familiar with the great amount of knowledge that is available to medical scientists today. Dr. Rappleye maintained that group practice was the only way to provide the advantages of modern medical science for large population groups at a reasonable cost. . . . If the group practice principle is widely accepted, the dean declared, the nation now has plenty of doctors.—*New York Times* June 3, 1950, per *Pub. Health Econ.*

Dentistry in Italy—In Italy dentistry is taught as a two years' extension course after six years of medical training. Thus all qualified dentists are medically qualified as well. In theory this is a fine system which should result in a high professional standard. Unfortunately, however, there is a very large number of dental practitioners with neither med-

ical nor dental training. Some of these are associated with the practices of doctors. Furthermore, a physician may practise dentistry without of necessity having attended a course in dentistry. It is estimated that 10 per cent of undergraduates in the medical schools plan to practise dentistry. Those who do attend the two year dental course, which is offered by several universities, suffer from a lack of tuition and the facilities for specialized dental education. The first measure to be taken to make the dental profession in Italy of a more uniform quality is legislation to prevent technicians and unqualified physicians from practising dentistry.

The Eastman Dental Dispensary in Rome is without doubt the best equipped and most outstanding institution in Italy. It is, however, no longer limited to work on children. Much of the space is now used for orthodontic and parodontal work, prosthesis and maxillo-facial surgery. In contrast the university clinic, the *Clinica Odontoiatrica*, where doctors are trained for dental practice, is very poorly equipped. The school in Bologna is better staffed and equipped and has the greatest number of students of all the dental schools. The school in Florence was destroyed during the war and has been rebuilt but still lacks essential equipment such as library facilities. There are at least two regions of dental fluorosis in Italy and the subject of fluorine in the prevention of caries has aroused interest. In Rome a large-scale study of the effect of topical application of fluorine is being undertaken.—*Br. D. Jour.*, April 6, 1950.

Net Income of Dentists Analyzed. — In 1949 the Office of Business Economics. U.S. Department of Commerce made a survey of the net incomes of the 78,000 dentists in the United States for the year 1948. The overall average was \$6,912.

A breakdown of the survey showed that the independent dentist had an average net income of \$7,047 compared with \$5,358 for salaried dentists. About 92 per cent of all civilian dentists derived most of their professional income from independent practice while only 8 per cent were salaried.

In 1948 slightly more than 20 per cent of the dentists earned less than \$3,000. A similar proportion reported net incomes in excess of \$10,000. The remainder or approximately 60 per cent, earned between \$3,000 and \$10,000.

Income and age were found to be closely correlated. Average income increased sharply as age increased, until a peak average income of \$9,117 was reached for dentists 40-44 years of age. Beyond

that point, average income declined steadily. It was also found that the proportion of older dentists had increased markedly in the past decade.

It was also noted that dentists with one of more assistants, dentists who were wholly specialized and dentists who practiced in partnerships tended to have higher incomes.

Radioisotopes:—Dr. Edith H. Quimby, Associate Professor of Radiology (Physics, College of Physicians and Surgeons, Columbia University states in the September issue of the *N.Y. Journal of Dentistry* that the First District Dental Society of the State of New York is to be congratulated on its foresighted approach to the possible applications of radioisotopes to dental research problems, and states further that radioisotopes have already yielded much fundamental information, otherwise unobtainable, on the growth and development of plants and animals. They permit such things as the tracing, or following, of vital nutrients through the body and reveal how these materials are incorporated into tissues, bones, teeth and other body constituents.

Many problems in the growth and maintenance of healthy teeth may be studied through the use of radioactive substances. For instance, it may be possible to discover pathways by which new material is incorporated into the different regions of teeth,—since it appears that they do not exist in a static condition, as once assumed. This should then lead to better understanding of the causes of various dental troubles, and hence to improvements in their treatment.

It must be emphasized that radioactive materials are research tools—they are not to be confused with clinical treatment, although some research studies may be conducted at the clinical level. However, the investigation of any dental problem with radioisotopes can be carried out only by trained dental research workers. At the present time the Atomic Energy Commission limits the distribution of these materials to those carrying on their investigations in institutions where the requisite personnel and equipment are available.

Dr. Merritt First Recipient of Henry Spenadel Award.—The Henry Spenadel Award for significant service to dentistry will be presented to Dr. Arthur H. Merritt by the First District Dental Society at its Stated Meeting on October 2, 1950. This award was established by the Eastern Dental Society, a branch of the First District, in honour

of its distinguished member, Dr. Henry Spenadel, for his life-long devotion and untiring efforts in behalf of the Society and dentistry in general.

In selecting Dr. Merritt as the first recipient of this award, the First District Dental Society recognizes his many invaluable contributions to dentistry, both as a practitioner and as a teacher, as well as his loyal devotion to high professional ideals which have been a constant source of inspiration to his fellow practitioners. —N.Y. State D. Jour.

Military Services May Call 1,200 More Dental Officers in U.S.A.—The three military branches will soon require an additional 1,200 dental officers, it is announced in Washington. This figure is based on the working ratio of two dental officers for each 1,000 military personnel on active duty.

The appeals for voluntary service have thus far met with a fair response. Any deficiency in the necessary requirement will have to be made up by calling upon reservists. Under the draft law, effective June 30, reservists may be called "with or without their consent."

The World Medical Association.—Within the last two years two bodies have been organized which reflect the growing sense of interdependence amongst civilized and peace-loving nations; these are the World Health Organization and the World Medical Association. They are both medical organizations, but, in brief, it may be said that the W.H.O. is a governmental agency, with international objectives of a public health nature, whilst the W.M.A. represents organized medicine on an international scale. In general, it is made up of representatives from most of the national medical organizations in countries outside of the Communist-dominated countries.

What is the object of the W.M.A., and to what extent is it justifying its existence, for it must be realized that it costs both money and the time of busy men? We have our own problems at home and they are becoming more and more complex. But if the events of the last ten years have done nothing else they have shown how impossible it is for any country to separate itself from the rest of the world.

Perhaps the most striking aspect of the W.M.A. is that it has no axe to grind save one—the promotion of better health for all the people of the world. No other objective could more readily recommend its support to our profession.—From Editorial in Can. Med. Assoc. Jour. Sept. 1950.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

OCTOBRE, 1950

NO 10

L'ELECTROLYSE DU FLUOR EN PROPHYLAXIE BUCCALE*

par PAUL-E. BEAUDET, B.A., D.D.S., Montréal

Au printemps dernier, lors du congrès offert par la Société Dentaire de Montréal à l'occasion du 25ième anniversaire de sa fondation, j'avais l'honneur de présenter un travail, qui a suscité beaucoup de commentaires; je croyais que les choses en resteraient là, mais votre distingué président, M. le Dr Victorien Dubé, m'a prié, pour répondre aux demandes qui lui ont été faites, de bien vouloir expliquer de nouveau la technique de ce traitement électro-thérapeutique. C'est donc un plaisir pour moi d'avoir à prononcer une causerie, à la première séance de ce nouveau terme, c'est-à-dire de la 26ième année de la Société Dentaire de Montréal, et j'en suis très honoré.

Depuis quelques années, les moyens préventifs employés en médecine et en dentisterie ont pris un essor considérable. Cela se comprend, si on tient compte des découvertes faites pendant la guerre et de la tendance à l'étatisation, dans chaque pays, qui cherche à développer la prophylaxie sur une haute échelle.

Dans notre domaine, il existe un médicament qui, depuis quelque temps, est bien en vogue et fait couler beaucoup d'encre.

En effet, le Fluorure de Sodium est connu aujourd'hui de la plupart des dentistes, comme préventif de la carie den-

taire. D'aucun hésitent à s'en servir, soit qu'ils doutent de l'efficacité du traitement, soit qu'ils craignent les complications, à cause des effets nocifs du fluor. Par contre, d'autres en font un usage fréquent et abusif, souvent sans discernement.

Ce n'est pas mon intention de vous relater l'origine du Fluorure de Sodium, ou des controverses, qu'il a suscitées. Vous en faites déjà l'application à votre bureau, mais n'allez pas vanter les résultats à 100%. Pour ceux qui craignent les effets nocifs, je leur dirai que le fluor est aussi important pour les dents que l'iode pour la glande thyroïde et pourtant ce dernier est poison.

L'action du Fluorure de Sodium est incontestablement efficace; elle a été prouvée à plusieurs reprises, soit en application locale, soit dans l'eau potable, soit en rince-bouche. Tous ces procédés sont effectifs à un pourcentage plus ou moins élevé. Seulement, il ne faut pas s'attendre, ni déclarer que nous n'aurons plus de carie, avec ce produit tel qu'employé. Ce n'est pas un spécifique, ni un vaccin.

Nous avons encore beaucoup de recherches à faire avant d'en arriver à ce point.

Comme cette découverte est encore récente, il faut s'attendre à des améliora-

*Causerie prononcée devant les membres de la Société Dentaire de Montréal, à la séance de septembre 1949.

tions constantes. C'est en effet ce nouvel aspect du sujet dont je veux vous entretenir spécialement et qu'on appelle l'électrolyse du fluor.

On sait que le fluor agit de deux manières, c'est-à-dire qu'il a une action interne ou générale sur l'organisme et une action externe ou locale sur les dents. Dans l'organisme, le fluor est un fixateur du calcium; certains auteurs prétendent qu'il est un stimulant des glandes. Les dents, tout comme les os, tirent profit de ce produit. Le fluor dans la proportion de 1 à 2 parties par million, qu'on ajoute à l'eau dans certaines localités, agit sur l'organisme en général et sur les dents en particulier. On en voit la preuve lorsqu'on constate les résultats chez les personnes, qui ont absorbé une quantité très forte de fluor, c'est-à-dire au delà de 2 parties de fluor par million d'eau: le fluor agit alors en destructeur, produit l'ostéophyte ou ostéosarcome et de l'érosion sur l'émail des dents.

En application locale, le fluor pénètre de deux manières; 1°—Par capillarité, à travers les tissus, il pénètre dans l'organisme, étant donné que le dosage est beaucoup plus élevé (1 à 2%) que dans l'absorption par voie digestive. 2°—Il pénètre dans la dent par réaction chimique, à cause de son affinité pour le calcium.

Ici l'électrolyse prouve son utilité; non seulement, la décomposition est instantanée, mais la pénétration est certaine et les résultats plus rapides et simplifiés. D'après mes observations, un seul traitement est de beaucoup supérieur à quatre traitements d'application locale. Qu'est-ce que l'électrolyse? C'est la décomposition chimique d'une substance au moyen du courant électrique. Par exemple, si nous faisons passer un courant électrique dans une solution d'eau salée, le sel est décomposé dans ses éléments, qui sont le chlore et la soude. Cette solution d'eau salée se désigne comme un électrolytique, parce qu'elle peut être décomposée par un courant électrique. Les composés chimiques d'une solution sont séparés par le courant en ions, dont les uns positifs et les autres négatifs, suivant les

sodium est chargé d'ions positifs et le chlore chargé d'ions négatifs. Pour cette raison, on dit couramment l'ionisation, pour désigner l'électrolyse. Ces traitements se définissent comme suit d'après Sturridge. "C'est la pénétration de médicaments dans les tissus au moyen du courant électrique, qui modifie et change la composition chimique du médicament et du tissu, au travers duquel le courant passe."

Pour déterminer dans quelle direction les ions d'un électrolyte voyagent, il nous faut connaître de quels ions sont chargés les composants d'un médicament. Un médicament, dont les composants sont électro-positifs, est relié au pôle électro-positif de l'appareil, de même les corps électro-négatifs sont reliés au pôle électro-négatif. Ainsi le fluor, qu'on désire introduire dans les dents, est placé au pôle électro-positif et pénètre dans les dents par le courant qui atteint le pôle négatif, placé sur une autre partie du corps, en général, la main.

La durée du traitement varie suivant la rapidité des ions d'un corps et l'intensité du courant. On admet généralement la formule 30 milliampères-minutes, qui est la même pour les traitements de canal, ce qui signifie:

- 1 milliampère pour 30 minutes
- 2 milliampères pour 15 minutes
- 3 milliampères pour 10 minutes

Il est préférable de donner, dans le cas du Fluor, deux traitements de 7 à 8 minutes, à intervalle de 8 à 10 jours; en général, la dent répond à la sensibilité, lorsqu'on atteint 2 milliampères.

Voici maintenant un résumé de la technique à suivre:

- 1° Une bonne prophylaxie sur les dents à traiter;
- 2° Isoler avec la digue ou les cones isolants, de préférence;
- 3° Placez dans la main l'électrode négatif, en forme de crochet, (enlevez bagues pour éviter contact avec le métal);
- 4° Asséchez les dents isolées; on ne traite qu'une ou deux dents à la fois;
- 5° Saturer la dent d'une solution de fluorure de sodium à 2%;
- 6° Appliquez l'électrode positif, au bout duquel on a placé une aiguille ou fil de

métal rigide, sur la dent, de préférence à un endroit susceptible à la carie, fissure ou point de contact avec une autre dent; 7° Etablissez le courant sur l'appareil et montez l'ampérage jusqu'à ce que le patient éprouve de la sensibilité; vérifiez alors l'ampérage indiqué par l'aiguille, généralement 2 milliampères;

8° Maintenez le tout en position pour 7 à 8 minutes; Si l'aiguille indique $1\frac{1}{2}$ milliampère, il faudra prolonger le traitement à 10 ou 12 minutes.

9° A toutes les 2 minutes, ajoutez une goutte de fluorure sur le dent afin qu'elle soit continuellement saturée;

10° Quand le temps est écoulé, coupez le courant, enlevez le tout et faites rincer la bouche.

Sur quelles dents faut-il donner les traitements? De préférence sur toutes les dents permanentes et non cariées. Sur les dents temporaires, on ne pratique que le badigeonnage. Les meilleurs résultats sont obtenus, dès que chaque dent a fini son éruption. C'est-à-dire que les traitements commencent vers l'âge de 7 ans sur les molaires et incisives; à 9 ans sur les bicuspidés; à 11 ans sur canines et à 13 ans sur les 2ièmes molaires.

Il faut donner au moins deux traitements sur chaque dent, à intervalle de 8 à 10 jours. Dans les cas, que je viens de mentionner, ce sont des cas préventifs idéaux, ceux qui donnent les meilleurs résultats. Naturellement, rien ne nous empêche de donner des traitements sur des sujets plus âgés. Par exemple, un enfant de 10 ou 12 ans se présente avec des molaires aux fissures douteuses; alors, avec une petite pierre, nous faisons disparaître cette encoche et, s'il n'y a pas de carie pénétrante, nous faisons le traitement, que nous répéterons deux ou trois fois. Le même procédé est utilisé chez un adulte dont les dents présentent une sensibilité, décalcification, ramollissement ou déchaussement d'un tiers gingival. Généralement après un ou deux traitements, cette sensibilité disparaît et, après quelques semaines, nous constatons la formation d'une dentine secondaire.

Voyons maintenant ce que nous pouvons penser de cette transformation. Naturellement, ce sont les résultats qui

comptent, mais il faut essayer de comprendre les réactions physiologiques et chimiques. On connaît le processus de la carie dentaire; la dissolution des sels minéraux de l'émail constitue la première phase de la carie et c'est à ce moment, avant que la carie ne pénètre dans la dentine, qu'il faut faire de la prophylaxie, c'est-à-dire que les traitements au fluor donnent des résultats. Est-ce que le fluor neutralise l'action de l'acide lactique, produit de la fermentation, qui dissout l'émail? Ou est-ce qu'il forme avec le peu de matière organique que contient l'émail une gaine protectrice semblable à la gaine de Newman? Ou est-ce qu'il pénètre à travers cet émail poreux pour former dans les canalicules dentinaires une dentine secondaire ou une activité plus intense de calcification, tout comme il s'en forme dans les os, après la réduction d'une fracture? Je crois que c'est plutôt cette dernière transformation, qui se produit; en effet, lorsqu'on enlève l'émail au tiers gingival pour mettre la dentine à nue et qu'on applique l'électromédication, il se forme une dentine secondaire tout aussi dense que l'émail et aussi résistante. Ce changement devient visible après quelques semaines.

Phillips et Swartz définissent les transformations comme suit:

1° Une augmentation de la dureté de l'émail, vérifiée au moyen d'un appareil très précis appelé le Tukon Tester.

2° Résistance plus marquée de l'émail au contact des acides; la comparaison fut établie après immersion dans l'acide acétique d'une quantité de dents traitées et non traitées.

3° La résistance à la carie est profonde; il faut pratiquer un brossage prolongé à la pierre-ponce pour faire disparaître cette densité.

Le procédé, que je viens de vous expliquer, est un complément ou une amélioration du traitement en badigeonnage au fluorure de sodium, que vous connaissez.

Je puis vous dire que je pratique l'électrolyse au fluor, depuis quelques années. C'est à la suite d'une rencontre avec les Drs Bibby, Armstrong, McKay et Dean, à la conférence du New-York Institute of

Clinical Oral Pathology, tenue à New-York le 30 nov. 1944, auxquels j'ai fait part de mon projet d'électrolyse et c'est sur leur instances que j'ai décidé de pratiquer l'électrothérapie.

Je n'ai eu à déplorer aucun incident et, par contre, je n'ai constaté que des améliorations très marquées. Naturellement, il faut attendre plusieurs années avant de pouvoir établir un pourcentage. Je ne puis pas vous donner de chiffres exacts, mais je puis vous assurer que je n'ai eu à obturer aucune des dents que j'ai traitées et les premiers traitements remontent à trois ans. Je n'ai pas la prétention

d'avoir obtenu le maximum d'efficacité dans traitements préventifs de la carie dentaire; il y aura certainement des procédés ou médicaments plus ou moins efficaces dans l'avenir. Peut-être la pâte magique du Dr Stedman est-elle de ceux-là! Mais j'ai la satisfaction d'avoir obtenu des résultats dans mes travaux. Il me fait plaisir de vous les transmettre pour que vous puissiez en faire bénéficier votre clientèle et j'en remercie la Société Dentaire de Montréal et son président, qui m'en ont fourni l'occasion.

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Cartierville, Montréal

*Ayez de votre bouche un grand soin chaque jour;
Le désordre et le tartre épouvantent l'amour.
Mais la blancheur des dents, si l'on vous voit sourire,
Soumettra tous les coeurs à votre aimable empire.*

Extrait de
Le Dentiste des Dames
par le CH^{er} LEMAIRE
Chirurgien Dentiste de Leurs Majestés
le Roi et la Reine de Bavière,
Membre de plusieurs sociétés savantes.
M. D CCCXXIV

Université de Montréal

Faculté de Chirurgie Dentaire—Cours Gradués et Postsecondaires—1949-1950

Endroits	Chi- rurgie	Diag- nostic	Endo- dontie	Ortho.	Pedo.	Perio.	Pro- these
Québec.....	16	—	5	3	2	3	—
Ontario.....	10	—	—	2	—	—	—
Saskatchewan.....	1	—	—	—	—	—	—
Alberta.....	1	—	—	1	—	—	—
Colombie britannique	—	—	—	1	—	—	—
Nouveau-Brunswick	1	—	—	2	—	—	—
Etats-Unis.....	—	—	—	3	—	—	—
Haiti.....	1	—	—	—	—	—	—
	30	—	5	12	2	3	—

Cinquante-deux (52) élèves ont suivi ces cours.

L'ANALGESIE: UNE SOLUTION PRATIQUE AU PROBLEME DE LA DOULEUR EN DENTISTERIE*

par J. A. N. THIBERT, D.D.S., F.I.C.A., D.D.S. (Hon. Causa, U. de M.), Fitchburg, Mass.

Le sujet en discussion n'est pas nouveau; il est déjà bien connu du monde médical et reconnu universellement, comme un des adjuvants les plus souhaitables dans la pratique de notre profession.

Mais comme il y a encore beaucoup de dentistes, qui connaissent peu l'Analgésie, ou, qui croient qu'elle est une forme d'anesthésie plus compliquée que pratique, il semble opportun de la faire connaître à une réunion internationale, telle que celle-ci.

Les statistiques montrent qu'au moins 70% des gens, qui ont besoin de traitements dentaires ne se rendent pas chez le dentiste, ou le font quand la douleur les y mène. POURQUOI? . . . Qu'elle est la raison d'être de cette hésitation pour les séances, chez le dentiste? Pourquoi cette préférence apparente d'endurer plutôt que d'être soulagé? La réponse, comme nous la savons tous, réside dans la *crainte*.

Oui, la crainte de la douleur est le leitmotiv, qui empêche ces personnes souffrantes de se rendre dans nos cabinets. Ce n'est pas seulement un fait patent; cette crainte, de plus, constitue un problème, que, nous, dentistes, *devons envisager* et tenter de résoudre.

L'Analgésie, avouons-le, nous offre une solution admirable à ce problème; c'est pourquoi, pour apprécier sa pleine valeur et être convaincu de sa place nécessaire dans notre exercice quotidien, considérons son action et ses effets sous deux aspects: psychologique et physiologique.

ASPECT PSYCHOLOGIQUE

La *psychologie* est un mot, qui vient du Grec, *Psyche*, ou âme, et qui définit la science, qui s'occupe de l'étude de l'homme dans sa nature humaine distincte

de sa *nature animale* ou de sa simple constitution physique.

C'est l'étude des activités de l'esprit humain, en contraste avec la *physiologie*, qui est la science des activités *corporelles*. Cette science qui traite des processus de l'esprit est des plus nécessaires et d'application constante dans l'exercice de la dentisterie. Tous savent que l'obstacle le plus inhérent à une pratique vraiment satisfaisante de notre profession est un facteur purement psychique: la *peur*.

La *peur* dans ses rapports avec la dentisterie n'existe pas seulement dans l'imagination. Elle est *réelle*, quoique *passagère et intangible*. La peur qu'éprouve la moyenne des patients, chez le dentiste, est ordinairement causée par des expériences malheureuses, *présentes ou passées*. Malheureusement le patient a conservé dans son esprit des souvenirs désagréables d'opérations dentaires, et ceux-ci datent parfois de sa plus tendre enfance. Ou encore des compte-rendus effrayants lui sont parvenus de son entourage. Et on sait qu'un folklore riche en cérémonies "d'arrachage de dents" laisse dans l'imagination une impression aussi désastreuse que profonde. La frayeur qui s'empare du patient et qui nuit au travail du dentiste peut être basée sur l'expérience personnelle ou sur des impressions émotives; ces impressions sont fixées à un tel point dans le subconscient qu'il est impossible, selon nous, de les contrôler par les moyens psychiques ordinaires. Cette pensée est décourageante pour le dentiste, qui s'arrête à cette constatation, mais elle représente un défi que le dentiste averti et désireux d'un rendement professionnel plus achevé s'efforce de solutionner.

La peur *peut* et *doit* être annihilée par

*Travail présenté aux réunions de la Fédération Dentaire Internationale, à Paris, le 29 juillet 1950.

la diminution de la douleur. Il y a encore trop de douleur dans le maintien, la restauration et l'obturation des dents. Il faut apprendre à *dissocier* la douleur de nos interventions pour réussir à éliminer la crainte bien fondée du fauteuil dentaire.

Le but réel de la dentisterie représente quelque chose de plus que l'extraction indolore des dents cariées. La prévention des maladies et la conservation de la santé, grâce aux traitements dentaires satisfaisants et donnés à temps, constituent l'objectif idéal de notre groupement professionnel. Comment pourrions-nous réaliser cet idéal, si le patient, à cause de cette crainte inhérente à ces traitements, remet ses visites à notre cabinet, ou si, ce qui est pire il n'y vient pas du tout?

Notre rôle est de soulager la douleur, et pourtant les patients nous craignent. Nous recommandons des examens périodiques des dents et les patients manquent au rendez-vous. Quand ils y viennent, ils sont généralement si tendus et effrayés que nous ne pouvons faire grand-chose pour eux. Notre travail est plus lent et ne peut être complété dans une séance. Cela signifie des rendez-vous et une dépense supplémentaires pour la patient et une perte de temps précieux pour le dentiste: ces deux facteurs agissent au détriment des deux partis concernés.

L'état de choses que je viens de décrire, tout énigmatique qu'il est, n'est pas sans espoir. L'ANALGESIE libérera le patient de sa crainte du dentiste et de la douleur, que celui-ci lui inflige, si on s'en sert d'une façon convenable. Elle constitue une méthode éprouvée, utile et digne qu'on s'y arrête.

QU'EST-CE QUE L'ANALGESIE?

Le docteur Max Jacobs la définit: "C'est un état où il y a perte de sensation douloureuse, avec présence de conscience." Le docteur Sterling Mead, de Washington, D.C., parle de l'Analgesie comme de "la découverte qui augmente le confort du patient, en minimisant sa douleur et sa crainte."

Ajoutons que, d'une façon pratique, l'Analgesie ne représente que le premier

stage de l'anesthésie. C'est une découverte qui améliore le comportement du patient et qui diminue la tension de l'opérateur; car le dentiste peut contrôler beaucoup mieux un patient calme et, par le fait même, est libéré de cette tension, qui lui est imposée par un patient nerveux; en un mot, le dentiste peut faire du meilleur travail.

Il ne faut pas croire que l'Analgesie est une panacée. L'Analgesie ne signifie pas l'abolition de l'anesthésie générale ou d'anesthésie locale. L'anesthésie générale, la novocaïne et les autres analgésiques, ont leurs avantages et leur place appropriés. Ces agents sont indispensables pour plusieurs phases de la pratique dentaire. La préparation des cavités et des piles de pont, les injections, l'électrocoagulation, les points de suture, l'ablation des esquilles osseuses, le curetage des alvéoles et des dents, la prise d'empreintes ou de radiographies chez des patients aux muqueuses sensibles, toutes ces opérations délicates inspirent une crainte irraisonnée au patient à cause de la douleur qu'elles signifient.

La manipulation d'un patient bien nerveux demande la combinaison de l'anesthésie locale et de l'Analgesie; la novocaïne donne une anesthésie plus profonde, indispensable pour la chirurgie et l'Analgesie rend le patient plus souple et plus prêt à collaborer.

Quelques dentistes objecteront qu'un anesthésique local, comme la novocaïne, abolit aussi la douleur. Cela est vrai. Cependant, il faut se rappeler qu'il prolonge les réactions anesthésiques. Il y a aussi la possibilité d'anesthésie trop forte, qui accompagne souvent les injections; il y a aussi la probabilité de trop chauffer ou d'endommager la pulpe en préparant la cavité. Il y a aussi la certitude de douleur post-opératoire. De plus, l'*engourdissement*, produit par l'injection, représente une double faute: 1o-L'injection anesthésie seulement une région donnée et l'opérateur doit confiner son travail dans cette région.

2o-L'anesthésie durera une heure et plus après la séance. Cet état de chose est regrettable. Quand la *Douleur* revient, la *Peur* l'accompagne et celle-ci exerce

encore son influence désastreuse sur le patient. Ces réactions déplaisantes, ressenties après une injection, rendront plus effrayables les autres injections à venir.

Mon objection principale à la novocaïne, est la perte de temps considérable qu'elle occasionne; ma préférence va à l'Analgésie qui s'administre facilement, qui plaît au patient et qui agit tout de suite. De plus, l'Analgésie couvre tout la bouche et permet le traitement de n'importe quelle dent, peu importe sa position: haut, bas, gauche, droite. Cette qualité est bien commode. Enfin, l'Analgésie met de côté le danger de blesser la pulpe parce que celle-ci n'est pas anesthésiée; si la pulpe devient trop chauffée, le patient sera le premier à prévenir l'ennui, en avertissant le dentiste. "Cette remarque est souvent mentionnée". Nous parlerons plus longuement des effets physiques de l'Analgésie, plus loin.

Avant d'entreprendre la description de la technique d'administration de l'Analgesie, permettez-moi de souligner que l'Analgesie constitue le *premier* stage de l'anesthésie, connu sous le nom de période d'induction. "Elle est un état dans lequel les sensations douloureuses superficielles sont abolies pendant que le *solde* du système nerveux continue sa physiologie normale". Appuyons sur le fait que le grand facteur du succès de l'administration de l'Analgesie réside dans notre attitude vis-à-vis cette méthode et dans notre façon de la présenter au malade. Si nous concevons bien ce qu'est l'Anesthésie, nous n'auront pas de difficulté à comprendre l'Analgesie. Nous avons consacré beaucoup de temps à l'étude de l'anesthésie locale, de la radiographie, de la prothèse, des incrustations en or et de toutes les branches de notre art; il nous faut aussi prendre le temps d'observer les effets et la technique de l'Analgesie.

Sa présentation au patient ne doit pas différer de celle qui est faite pour tout autre traitement ordinaire. La façon, dont nous ferons apprécier l'Analgesie au patient, règlera le succès de son administration et contentera et le patient et le dentiste.

Voyons maintenant la

TECHNIQUE D'ADMINISTRATION

Il y a plusieurs agents producteurs d'Analgesie, comme nous le verrons plus tard. Pour rendre la chose bien claire, j'insisterai sur la méthode employée pour la mixture protoxide d'azote-oxygène, parce que, à mon avis, cette substance est la plus simple d'administration, la plus sûre et la moins toxique pour produire l'Analgesie. L'emploi de l'Analgesie demande d'abord de se familiariser avec son appareil. Il est bien évident qu'il n'est pas nécessaire de connaître, tel un mécanicien, tous les engrenages de cet appareil; il faut néanmoins bien concevoir le fonctionnement de chaque partie pour obvier aux pannes mécaniques, en tout temps, quand elles se présentent.

La deuxième considération, qui s'impose tout de suite est qu'il n'y a pas de dosage uniforme pour le protoxide d'azote. La raison évidente de l'absence de dosage uniforme est n'y a pas deux êtres vivants qui réagiront de la même manière, dans les mêmes circonstances; c'est à dire, qu'il n'y a pas deux patients qui absorberont la même quantité de protoxide pour se rendre au même stage d'Analgesie: une Analgesie réussie ne dépend pas d'une méthode spéciale d'administration, ni d'un dosage uniforme, (quoique certains fabricants d'appareils fournissent de précisions bien exactes sur le dosage). Il faut compter sur son *expérience personnelle*. L'étude du fonctionnement de l'appareil et la conviction que l'Analgesie et l'anesthésie générale sont deux choses différentes et que celle-là ne sert qu'à rendre tolérable la taille de la dentine, suffiront à vous éclairer sur les symptômes qui vous indiqueront la degré voulu d'Analgesie. Cette perfection s'obtient par l'expérience et l'observation des patients.

La meilleure façon d'apprendre est de commencer par s'analgésier soi-même. Un dentiste qui n'a jamais goûté à l'analgesie lui-même ne peut l'administrer avec enthousiasme; il lui est impossible de décrire avec conviction à ses patients les effets spécifiques de l'Analgesie.

Tentez l'expérience sur vous-même, en

observant les symptômes à mesure qu'ils se produisent. Ensuite, quand vous serez satisfait des effets de l'Analgesie, recommencez sur votre assistante, sur un ami ou deux, avant de vous aventurer sur vos patients.

Trois phases règlent l'administration de l'Analgesie:

- 1) l'ajustement du masque nasal sur la figure;
 - 2) le règlement du dosage à un niveau bas;
 - 3) la description au patient des symptômes qu'il va éprouver;
- si le patient règle lui-même la sortie du gaz, des instructions précises sur la façon de se servir de la poire à main, qui contrôle l'appareil de respiration.

Le débit doit être aussi faible que possible pour un patient novice; d'une façon courante, les patients peuvent être classifiés en trois groupes, en rapport avec le dosage.

(Il est faible, pour les enfants, et les anémiques; moyen, pour la plupart, à dose massive pour les individus physiquement forts, comme les sportifs, etc.). Mais cette classification ne s'adapte pas nécessairement à tous les patients. Durant les deux ou trois premières inhalations, maintenir le contrôle à un faible dosage; plus tard, en l'augmentant très lentement, il faut prévenir le patient des sensations à venir: un certain vide dans la tête, peut-être un étourdissement léger, une sensation de chaleur par tout le corps, une impression de picotement ou une lourdeur dans les membres. On s'adresse au patient avec des expressions simples, pour qu'il comprenne bien et qu'il ne s'effraie pas. On augmente sans cesse le dosage jusqu'à ce que la patient dise qu'il éprouve les sensations décrites.

L'état d'Analgesie ne donne que peu de signes extérieurs: le patient lui-même vous sert de guide.

Quand celui-ci a atteint le degré d'Analgesie voulu, il ressemble à une personne en état d'ivresse légère; sa voix a un son guttural; il se sent bien et euphorique; il est gai et prêt à collaborer. Mais, comme les personnes ivres, il vous répond évasivement. C'est pourquoi, il

faut lui parler doucement, mais avec une certaine *fermeté*. La conversation doit être brève. Il ne faut pas perdre de temps à lui demander s'il éprouve de la douleur. Il est inutile de le prier de cracher; commandez-lui de le faire ou placez une pompe à salive. Rappelez-vous qu'un patient, dans cet état, réagit à la moindre suggestion; la possibilité de la douleur ne doit pas être mentionnée. Au contraire, nous devons l'encourager avec des paroles comme celles-ci: "Vous faites un bon patient"; "Tout va bien"; "Vous coopérez très bien". Des félicitations du genre ajouteront une note agréable au travail et aideront tout le monde. Lui dire que le gaz qu'il respire, sent et goûte bon. Lui rappeler que l'Analgesie diminue la douleur et qu'elle l'aide. Ne *jamais* lui dire qu'il ne sentira rien, parce que cela est faux. Distinguons entre les termes *sensation* et *douleur*. Naturellement, il aura la sensation du toucher, parce qu'il est conscient; mais assurez-lui qu'il n'éprouvera pas de douleur, à condition que la pulpe ne soit pas exposée. L'Analgesie abolit la douleur, ou du moins, la rend tolérable par l'indifférence qu'elle procure au patient. J'appuie sur cette préparation psychologique du patient, parce qu'elle joue un rôle de première importance dans le succès de l'Analgesie. Celui qui a dit que l'Analgesie est faite de 50% d'analgesie et de 50% de psychologie, avait raison. Tout opérateur peut bien manier son appareil, mais il manquera son coup s'il n'est pas convaincu de la nécessité de l'Analgesie pour éliminer ou diminuer la douleur. Son doute influence le patient et l'affaire est manquée. *L'enthousiasme doit surpasser le doigté*. Puisque nous parlons de l'aspect psychologique de l'Analgesie, permettez-moi d'offrir une autre constatation. Les patients ont une aversion naturelle pour le mot "gaz". "Vapeur" leur va mieux et le mot "Analgesie" ne leur déplaît pas du tout. Soignons donc notre vocabulaire; supprimez les appellations telles que "sommeil", "perte de connaissance", et surtout "gaz". Je ne veux pas dire qu'il faille employer des mots vagues, en parlant de dentisterie, mais en bannissant

les expressions qui font peur, nous contribuerons à conquérir cette crainte du fauteuil dentaire, dont nous parlions plus tôt.

ASPECT PHYSIOLOGIQUE

Parlons maintenant des effets physiologiques de l'Analgesie. Voyons ce qui se passe dans l'organisme.

Tout agent anesthésique agit sur la partie sensitive du cortex-cérébral, en donnant une sensation sourde, qui ne produit pas nécessairement l'inconscience; ensuite il agit sur la zone sensitive de la moëlle épinière. Plus tard, son action se porte sur la section motrice de la moëlle. L'Analgesie s'amène quand la partie sensitive du cortex a été atteinte et quand les sensations ont été amoindries ou entièrement abolies durant le premier stage ou la période d'induction. Cette brève explication du phénomène anesthésique indique bien que l'Analgesie n'est pas l'anesthésie et que l'une et l'autre ne peuvent se superposer.

Il y a peu de symptômes extérieurs. Presque toujours, la respiration demeure la même ou varie très peu. La pupille se dilate ou se contracte parfois, mais la plupart du temps, ne change pas. La figure peut rougir. Le langage se modifie, comme je le disais tout à l'heure. Le signe le plus appréciable consiste dans l'engourdissement des extrémités, et une sensation de picotement dans les doigts. Mais, je le répète, la meilleure façon de se rendre compte de la présence d'une Analgesie suffisante pour procurer un fraissage indolore réside dans la description de ses sensations par le patient.

DANGERS ET CONTRE-INDICATIONS

La question des dangers de l'Analgesie est souvent soulevée, et je m'efforcerai de répondre aux objections les plus fréquentes, qui touchent presque toutes au côté physiologique.

La première question qui nous est le plus souvent posée demande deux renseignements: *"Comment déterminer le dosage de l'Analgesie et que se passera-t-il, si on dépasse la dose normale?"*

Comme nous le disions, d'une façon générale, les patients peuvent être

groupés en trois classes, en rapport avec la dose requise: faible, moyenne, massive. Les alcooliques et ceux qui font une besogne physique considérable, requièrent une dose plus grande de protoxide que ceux qui font un travail sédentaire. D'un autre côté, il est étonnant de constater que des femmes, apparemment fragiles, doivent recevoir une dose massive avant d'être analgésisées. En fait, le dosage pour le même patient peut varier avec les circonstances. Nous avons remarqué, à plusieurs reprises, que l'administration répétée du protoxide d'azote au même patient varie chaque fois. Cette constatation prouve que l'état organique joue un rôle de premier plan au moment de l'Analgesie. Le danger de donner une trop forte dose d'Analgesie est presque inexistant. D'abord l'appareil moderne d'Analgesie est quasi-impeccable. Le patient ne peut pas respirer seulement du protoxide, parce que la machine mêle automatiquement de l'air au protoxide en fournissant assez d'oxygène pour empêcher le patient de dépasser le stage d'Analgesie. Toutefois, dans un cas d'urgence, il y a une manette sur le réservoir d'oxygène pour augmenter instantanément la teneur d'oxygène.

Le patient devient-il excité et ses dents hypersensibles?—Il a alors dépassé le premier stage d'anesthésie. Il faut alors discontinuer le protoxide, attendre quelques instants et continuer. Si vous le préférez, enlevez le masque, laissez-le revenir à l'état normal et recommencez tout de nouveau. Cette difficulté ne se produira pratiquement pas, si l'Analgesie est donnée avec soin, en augmentant le dosage lentement, en observant les réactions du patient et en diminuant le dosage, quand c'est nécessaire.

Dans mon cabinet, je me sers de l'Analgesie sur des patients de toutes catégories et je n'ai jamais eu d'expérience désastreuse et je n'ai jamais lu de rapport mentionnant des décès, des asphyxies ou des nausées, au cours d'Analgesie. La modération et la prudence sont les règles à suivre. Je veux appuyer ici sur la nécessité pour le patient de respirer par le nez. La respiration doit être normale, car, si elle est précipitée et

brève, elle débarrasse l'organisme de son acide carbonique trop rapidement et le patient se sent vite fatigué, souffre de céphalée ou d'autres ennuis. Exigez une respiration normale et une détente totale, en vous servant de termes choisis, prononcés lentement, avec bonté et fermement.

Une autre question qui nous est fréquemment posée est celle-ci: "*Combien de temps pouvons-nous garder un patient sous Analgésie, sans danger de complications post-opératoires?*"

Pour la durée de toute opération, le dentiste doit envisager le tempérament et la résistance physique de son patient; il en est ainsi de l'Analgésie. Plus spécialement pour l'Analgésie, le dentiste se rendra compte que le temps consacré au traitement d'un patient peut-être prolongé, spécialement dans le cas de personnes bien nerveuses, hypersensibles et irritables. Dans notre bureau, nous avons tenu des patients sous Analgésie durant 30, 40 minutes et même durant une heure, sans préjudices d'aucune sorte. Deux autres questions fréquentes: "*Quels sont les effets post-opératoires de l'Analgésie?*" et "*Combien de temps le patient prend-il pour se remettre d'une Analgésie?*" La première question a une réponse bien simple: *Il n'y a pas d'effets post-opératoires.* Le protoxide d'azote ne change rien au métabolisme organique et ne forme pas de composé dans l'organisme. Il est éliminé par les mêmes voies que celles de son absorption.

A la seconde question, je répondrai: *Le patient redevient à son état normal, quelques minutes plus tard.* Il se lève du fauteuil sans fatigue et autre ennui post-opératoire; il se sent reposé et encouragé, en pensant à la séance suivante, car il sait maintenant que, grâce à l'Analgésie, il ne craint plus les interventions dentaires.

On nous demande s'il faut prescrire une médication préalablement à l'Analgésie. Là encore la réponse est facile: *Aucune prémédication est nécessaire.* Rarement nous voyons-nous dans l'obligation de donner des médicaments. Dans le cas d'un patient extrêmement nerveux, du Seconal (1½gr.) ou du Nembutal

(¾gr.), peut-être prescrit. Comme ces remèdes agissent rapidement et donnent un effet assez court, le patient se remettra assez rapidement et pourra s'en aller seul, sans inconvénient; au contraire, si d'autres barbituriques sont donnés, il sera affaibli à un point tel qu'il sera peu prudent de le renvoyer chez-lui seul.

Mentionnons ici que dans certains cas, le goût du protoxide augmente le flot salivaire; ces cas sont rares; cependant, pour obvier à cet ennui, on prescrit 1/120 gr. de sulfate d'atropine, pris une heure avant l'intervention. On nous demande parfois si l'âge est un facteur dans l'administration de l'Analgésie? Nous répondons: *non.* On peut le donner aux enfants de 5 ou 6 ans. Chez les enfants, l'analgésie est un bienfait indicible. Ces petits patients conservent une impression des plus favorables de leurs visites chez le dentiste; leurs mauvais souvenirs sont effacés et dans plusieurs cas, ne prennent pas racine.

Quelles en sont les limites au point de vue santé? Voici une question fréquente. Encore une fois, la réponse est simple: excepté les cas en convalescence, après une maladie grave, ou des cardiaques, ou toute intervention dentaire est contre-indiquée, l'Analgésie peut s'administrer en toute circonstance. Plusieurs de ces soi-disants cardiaques, qui peuvent grimper un escalier ou deux pour se rendre à votre bureau, font de bons patients pour l'Analgésie. S'il y a des doutes, demander à votre sujet de se pincer le nez durant 20 secondes et de retenir sa respiration. S'il le peut sans inconvénient, ne vous tracassez pas de sa lésion; il est capable de supporter l'Analgésie.

Au sujet des femmes enceintes: Ces femmes peuvent supporter l'Analgésie à n'importe quelle période de leur grossesse, sans danger. C'est même une avantage pour la femme enceinte, moralement et physiquement, d'être soulagée plutôt que d'être laissée à sa douleur. Nous avons analgésié un nombre considérable de femmes enceintes, sans remarquer rien de spécial. Les seules réserves à faire sont celles qui s'imposent pour l'anesthésie générale: tuberculose, a s t h m e ,

obstructions nasales, épilepsie, pneumonie récente, narcomanie, l'alcoolisme ou encore des personnes sous l'influence des liqueurs enivrantes. La manipulation des personnes nerveuses ou récalcitrantes ne demande rien de bien particulier.

Pour les patients extrêmement nerveux, une sédation au préalable est à conseiller. Dans le cas de nerveux modérés, l'Anal-gésie n'offre pas de difficultés une fois que la confiance a été installée dans l'esprit de ces gens.

Le succès de vos relations avec les patients nerveux réside dans votre propre confiance et votre conviction pour l'Anal-gésie et de votre habileté à en convaincre votre patient. Un patient, qui n'est pas convaincu après avoir été instruit des avantages de l'Anal-gésie, ne doit pas être traité. Il est inutile de perdre son temps à gagner ces patients et à les persuader. Ils ne seront jamais confiants, ni en l'Anal-gésie, ni à autre chose. Rarement, on rencontrera de ces incrédules; alors n'y attachez pas d'importance.

CONSEILS TECHNIQUES

Avant d'aborder la question d'appareillage et des autres agents analgésiques, j'aimerais à vous donner quelques conseils pratiques au sujet de l'administration de l'Anal-gésie.

Quelques patients n'aiment pas l'odeur plutôt sucrée du protoxide; pour ceux-ci, nous enduison le masque nasal d'un parfum quelconque. Nous nous servons d'essence de pommiers en fleur.

Il est bon, dit-on, de demander au patient de presser lui-même la poire de contrôle; ainsi le danger de dosage trop fort et la possibilité de dépasser le stage d'Anal-gésie, sont éliminés par le fait que le patient, rendu au-delà de ce stage, ne peut plus la presser. Cela est vrai. Mais il y a aussi avantage à ce que l'assistante donne le protoxide. Ainsi, le rythme est plus régulier. Dans mon cabinet, l'assistante manipule la poire et l'appareil. Voici d'autres suggestions: n'employez jamais de courroies, ni d'ouvre-bouches. La fermeture involontaire de la bouche dénote que le patient a dépassé la période analgésique. Le dentiste a besoin de ce symptôme pour doser son Anal-gésie.

Il faut aussi utiliser des fraises cou-

pantes pour éviter le surchauffement de la dent. Rappelons-nous que la pulpe exposée, qui n'est pas anesthésiée est toujours douloureuse, même quand le patient est sous Anal-gésie. Ne travaillez pas trop vite, ni trop longtemps sur une dent pour prévenir les chocs thermiques.

APPAREILLAGE ET FRAIS

Une erreur fréquente dans l'Anal-gésie réside dans un appareillage impropre. Pour avoir de bons résultats, il est essentiel d'avoir l'instrumentation appropriée. Un appareil adéquat est un gage de sûreté et de maîtrise de soi, en même temps de sécurité. Cette confiance naît de la certitude d'avoir tout sous contrôle. *N'essayez pas de convertir un appareil à anesthésie sous pression en un appareil à anal-gésie.* A moins d'être un expert, vous n'obtiendrez pas un bon rendement. J'emploie l'appareil Airator Heidbrink, qui est simple, sûr et économique.

Il m'est difficile d'évaluer d'une façon précise les frais d'opération pour l'Anal-gésie. Le coût du protoxide et le contenu des bonbonnes varie avec chaque pays. Aux Etats-Unis, voici ce que l'Anal-gésie coûte; avec ces chiffres, vous pourrez déterminer ce qu'il en coûte dans votre pays.

J'achète des bidons de 2,000 gallons, que je paie \$20.00, ou .01 par gallon. En se basant sur la durée moyenne d'une Anal-gésie, qui est de 10 minutes, une bonbonne de 2,000 gallons donner 200 anal-gésies. Le coût moyen est donc de .01 par minute, par patient, pour un débit moyen.

Un appareil à débit continu dépense plus de protoxide que la machine ordinaire; aussi une petite bonbonne coûte plus cher, à la longue, qu'une plus grosse. Chaque dentiste peut calculer ses frais en rapport avec son équipement. Il y a des divergences d'opinions tant qu'à la technique d'administration du protoxide d'azote. Quelques-uns préconisent une mixture de protoxide et d'oxygène; d'autres de protoxide et d'air. Je recommande le protoxide et l'air, que j'utilise tous les jours. On objecte qu'on ne peut prolonger l'Anal-gésie de cette façon. On prétend que ce mélange de protoxide et

d'air produit une désoxygénation, une asphyxie, etc., tandis que l'autre méthode, dans les mêmes proportions, élimine tous ces dangers. Ces assertions sont fausses, puisqu'il n'existe pas de débit dosé pour l'Analgésie au protoxide d'azote et à l'oxygène; ensuite, ces opérateurs, qui placent d'une façon étanche le masque nasal, oublient que le patient demeure la bouche ouverte et qu'il respire toujours une certaine quantité d'air. Ce volume d'air dilue le protoxide et l'oxygène et en dérange le dosage. Peu importe les efforts faits par le patient pour respirer par le nez, la bouche ouverte favorise l'aspiration d'air. Le masque nasal, il est vrai, doit être bien appliqué pour l'anesthésie; néanmoins, l'Analgésie est produite par le mélange de protoxide et d'air. Nommez-le protoxide, oxygène et air, peu importe; mais ne nous leurrions pas en pensant qu'il s'agit uniquement de protoxide et d'oxygène. Et en passant, un mélange de protoxide, d'oxygène et d'air coûte plus cher, car dans ce mélange, le protoxide est dilué par l'oxygène.

AUTRES AGENTS ANESTHESIQUES

Si vous ne pouvez vous procurer l'appareil Airator de Heidbrink ou un autre semblable pour l'Analgésie de vos patients, il existe d'autres agents qui produisent un effet analgésique.

Le CHLOROFORME est un bon agent anesthésique. Je l'ai connu, il y a une vingtaine d'années, par l'intermédiaire d'un vieux médecin de chez-nous qui l'avait utilisé, des années, pour ses accouchements. Ce médecin ne connaissait pas ses propriétés physiologiques, mais savait qu'il insensibilisait ses patientes et leur permettait de mettre leur bébé au monde sans douleur. Il avait constamment sur lui une bouteille de chloroforme. A l'occasion du lancement d'un abcès ou de chirurgie mineure, il en imbibait un vieux cône de feutre et le remettait au patient; celui-ci en le respirant, s'anesthésiait lui-même. Le patient était enchanté, le vieux médecin aussi et jamais, durant toutes ses années de clientèle, il eut à rapporter un cas de mortalité.

Le trilène ou le trichloréthylène

(CCL2-CHCL) est un autre anesthésique désirable. C'est un liquide incolore, susceptible d'être mêlé à d'autres agents, comme le protoxide et l'oxygène. Il est moins toxique que le chloroforme et il est sûr. Des électrocardiogrammes prouvent qu'il ne peut pas, ou presque pas, causer la mort. Comme il n'est pratiquement pas irritant, son induction est agréable et rapide. Les signes d'anesthésie, de ce fait, doivent être surveillés de près. Parfois la respiration est rapide, mais pas à un rythme alarmant.

Méthode d'administration. Comme le Trilène est bien volatil, on ne peut le donner en méthode ouverte. Si on a un appareil pour le protoxide-oxygène, la solution peut-être versée dans la bouteille pour le Chloroforme accolée à l'appareil.

Ou bien, on peut s'en servir de cette façon-ci: prenez une éprouvette ordinaire; faites-y trois ouvertures avec une pierre en carborundum; une au bout, une autre au tiers inférieur et l'autre au tiers supérieur. Placez dans l'éprouvette une boulette de coton imprégnée de Trilène, en la logeant entre la deuxième et la troisième ouverture. Bouchez le dessus de l'éprouvette d'un bouchon de liège et demandez au patient de respirer les vapeurs de Trilène qui s'échappent à l'autre bout troué; cet appareil des plus simples donne de bons résultats. Une autre installation du même genre a été suggérée par le docteur P. H. Williams, d'Angleterre. Le Trilène n'est pas dispendieux.

CONCLUSIONS

Au début de ma communication, je vous disais que *la peur de la douleur* était la principale raison de la préférence du public à souffrir de maux de dents, plutôt que d'en être soulagé. Je prétendais que l'Analgésie offrait une solution merveilleuse à ce problème. Je me suis efforcé de vous convaincre de la nécessité de son emploi universel dans la dentisterie. Je vous ai expliqué ce qu'est l'Analgésie et ce en quoi elle diffère de l'anesthésie et aussi ses avantages sur l'anesthésie locale.

J'ai essayé de vous décrire aussi fidèlement que possible ses effets physiologiques et psychologiques sur le patient; j'ai exposé sa technique et ses frais

d'opération; j'ai donné les réponses aux questions, qui me sont les plus fréquemment posées, au sujet de ses dangers et de ses contre-indications.

Pour résumer cet exposé, j'aimerais vous décrire encore une fois une séance typique d'Analgésie.

A un patient novice, expliquez-lui brièvement et avec enthousiasme ce qu'il doit attendre de l'Analgésie. Dites-lui qu'il ne s'endormira pas et qu'en respirant cette vapeur inoffensive et plutôt plaisante, il demeurera conscient et collaborera tout au cours de l'intervention. Exposez-lui qu'il *sentira* l'instrument dans sa bouche, mais qu'il *ne sentira pas de douleur* et que sa tête deviendra légère. Demandez-lui de vous avertir dès qu'il éprouvera des piquements dans ses membres et spécialement dans le bout de ses doigts.

Placez le masque sur son nez; ouvrez

la manette de contrôle lentement et passez la poire à votre assistante. Augmentez le débit *bien lentement*, en surveillant attentivement ses réactions. Quand il vous dira qu'il ressent des sensations de picotement, au bout de deux ou trois minutes, il est en état d'Analgésie et vous pouvez commencer votre travail, sans crainte de lui faire mal. Quand la préparation des cavités est terminée, enlevez le masque et laissez votre patient se reposer quelques instants pendant que vous préparez votre substance à obturation. A la fin de l'obturation, votre patient est revenu à l'état normal et vous remerciez un patient heureux, soulagé et reconnaissant. Vous avez là un patient, dont la crainte du fauteuil dentaire s'est évaporée avec l'air qu'il a respiré.

217 Oak Hill Rd.,
Fitchburg, Mass.

COURS GRADUES ET POSTSCOLAIRES 1950-1951

SERVICES	DATES	DUREE DU COURS	INSCRIPTION LIMITEE A
chirurgie et anesthésie	du 6 au 10 novembre, Seldin, Thoma et personnel de la Faculté	1 sem.	30
	du 23 au 28 avril	1 sem.	12
	les 5, 6, 13, 14 et 15 fév.	5 jours	10
	les 5, 6, 13, 14 et 15 mars	5 jours	10
	sept. '50/juin '51	1 année	3
endodontie	du 15 au 20 janvier	1 sem.	12
	les 7, 14 et 21 nov.	3 jours	6
	les 8, 15 et 22 mai	3 jours	6
orthodontie	sept. '50/sept. '51	1 année	10
	du 25 au 30 juin, Dr Jos. E. Johnson et pers. de la Fac.	1 sem.	30
prothèse	du 13 au 18 novembre	1 sem.	5
	du 4 au 9 décembre	1 sem.	5
	du 15 au 20 janvier	1 sem.	5
	du 5 au 10 février	1 sem.	5
	du 5 au 10 mars	1 sem.	5
pédodontie	les 23, 24, 25 et 26 janv.	4 jours	8
	les 10, 11, 12 et 13 avril	4 jours	8
diagnostic	du 5 au 10 février	5 jours	15
	du 12 au 17 mars	5 jours	15
périodontie	du 5 au 9 février	5 jours	8



M. LE DOCTEUR GASPARD FAUTEUX

qui vient d'être nommé lieutenant-gouverneur de la province de Québec.

A moins d'erreur, le docteur Fauteux est le premier dentiste à occuper le poste de représentant de Sa Majesté, dans une province canadienne.

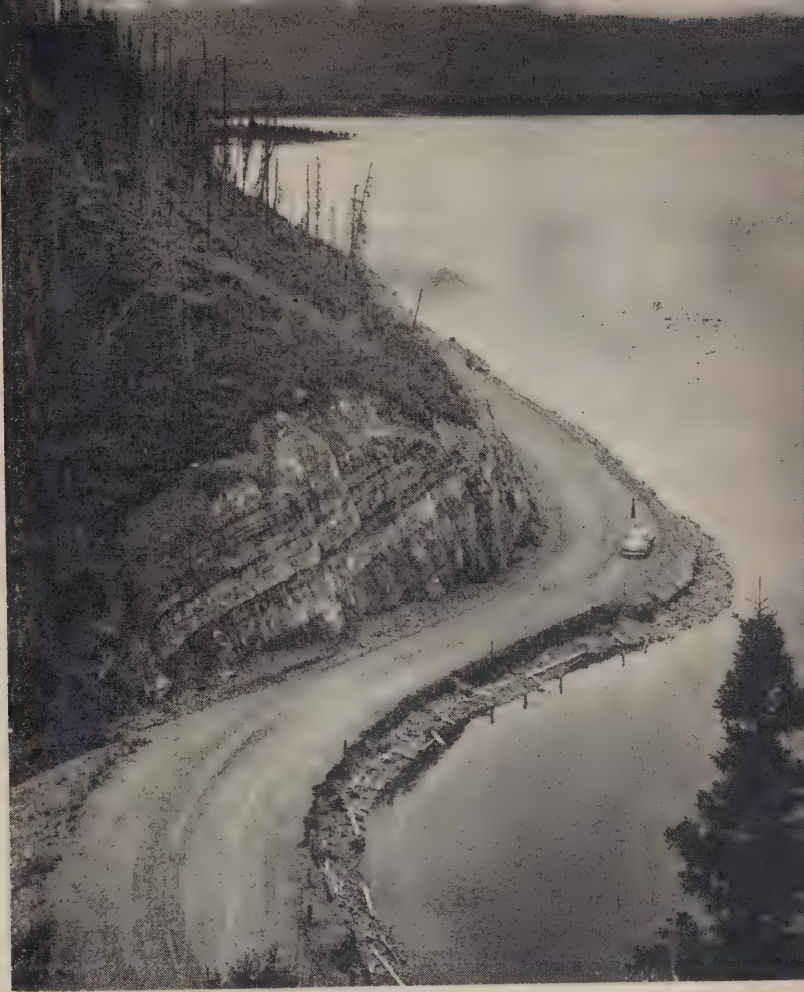
Le docteur Fauteux est ancien député au Parlement fédéral, ancien Orateur de la Chambre des Communes, vétéran de la première Grande Guerre, ancien Gouverneur du Collège des Chirurgiens-Dentistes de la Province de Québec, Commandeur de l'Ordre National de la Légion d'Honneur, de France.

Les dentistes canadiens se réjouissent de cette nomination et offrent au docteur Fauteux leurs chaleureuses félicitations.

Il y a certains couteliers qui se mêlent d'ôter les dents. Apparemment, les instruments qu'ils font leur donnent la démangeaison de les essayer.

Tant de gens s'ingèrent de travailler aux dents quoi qu'ils soient d'une autre profession, que je crois qu'il y aura bientôt plus de dentistes que de personnes affligées des maux des dents!

LE CHIRURGIEN DENTISTE OU TRAITE DES DENTS
PIERRE FAUCHARD
Expert pour les dents
1728



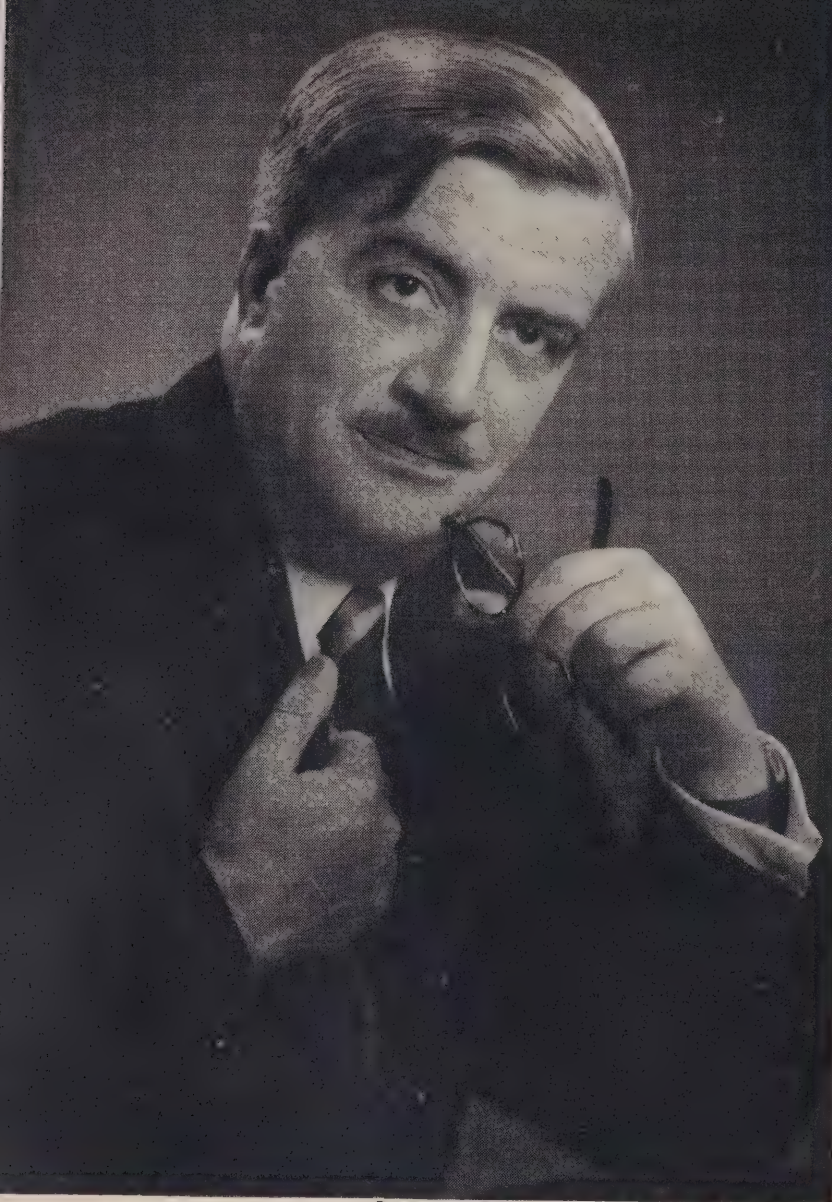
*Photograph by RICHARD HARRINGTON
Courtesy of Highway Travelers*

ALASKA HIGHWAY

If peace be in the heart,
The wildest winter storm is full of solemn beauty,
The midnight flash but shows the path of duty,
Each living creature tells some new and joyous story,
The very trees and stones all catch a ray of glory,
If peace be in the heart.

CHARLES FRANCIS RICHARDSON.





Portrait by NAKASH, Montreal

DR. GASPARD FAUTEUX

Appointed Lieutenant-Governor for the Province
of Quebec

Past Speaker of the House of Commons

Past M.P. for Ste-Marie (Montreal)

Veteran of the First World War

Past Governor of the College of Dental Surgeons
of the P. of Q.

Past Chief of the Oral Surgery Department of the
Hôtel-Dieu (Montreal)

Director of many business firms

Commandeur de l'Ordre National de la Légion d'Honneur
(France)

World traveller

The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, NOVEMBER, 1950

No. 11

WHY FIXED PARTIAL DENTURE PROSTHESIS?*

by CLAUDE R. BAKER, B.A., M.S., D.D.S., Seattle, Washington†

MAN for centuries decorated, mutilated, and adorned his teeth. The practice of substitution for partial loss of the dental arch was, and is, for the most part inspired by vanity and as a consequence the demand for the service is greatest if the loss is obvious. This very human trait is probably as strong today as it was centuries ago and is very much a part of human existence.

We have stretched ourselves a bit since the turn of the present century due to the acquisition of some knowledge concerning the dental mechanism as a masticatory function and have proved clinically to a degree of satisfaction at least that substitution for lost segments of the dental arches, particularly when treatment is timely, is well worth while—that such action constitutes a health service, and that the selection of an area for treatment bears no greater importance in one part of the mouth than in another generally speaking. The most powerful factor with which we have to work is habit. Sometimes we approach the solution of problems via scientific method and sometimes we do not. We know that as human beings we demonstrate a certain natural propensity for delusion and very often outright strong belief in the reality of questionable

procedure once it is put to scientific test. A breakdown and analysis of the method used for gaining knowledge pertinent to dental treatment is very much in order.

SCIENTIFIC METHOD

Restorative dentistry, the fixed partial denture in particular, developed from a very logical, if not scientific, pattern. Demand required that we discover methods and means for tooth substitution. It was well met technically and professionally. Our technical methods invite compliment. In general, clinical experience holds that the methods of modern American restorative dentistry with respect to the application of this phase of treatment are usually beneficial. The measure of the probable value of this type of treatment, however, points mainly to the degree of judgment required to review the macroscopic mechanical excellence of the apparatus alone. We have lagged sadly on one score, a paramount one, the acquisition of scientific data with respect to the physiological demand and reaction of the appliances we create. This knowledge has not kept pace with our ability to achieve technical excellence. The reasons for this are many and justifiably

*Read before the Section on Partial Denture Prosthesis at the Ninetieth Annual Session of the American Dental Association, San Francisco, October 19, 1949.

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parallel to the historical expectation, but these do not remove the fact that such acquisition has not been accomplished.

Our specific field in restorative dentistry relates to the treatment of lost segments of the human dental arch. Science as it is applied to and in this clinical activity has not gone beyond those efforts which seek various production methods for the restoration of lost parts. There are of course, individual exceptions to this statement.

In principle, the problem concerns an attitude relative to investigation and method for the study of treatment application to modern man's dental picture. The problem suggests an analytical study of the retrogressive progression as these terms might apply to the inherent conditions. The logical approach would seemingly be the invention of various types of apparatus and individual substitutes for the destroyed tissue. This is exactly what dentistry has done. However, observe this method of approach. It is not scientific—for logic is not the criterion for a scientific method. Many great men in scientific fields have made this mistake—Plato for example and others—but Aristotle, Huxley, Osborn, Lewes, and Whewell—each in a treatise pertinent to an approach to a scientific problem emphasize that a general principle must not be accepted from logic alone, but must prove its application to each fact, for it is in facts alone that we must seek general principles, and these must always accord with facts from which induction is the pathway to general laws.¹ Of course few great men follow their own advice to the letter. On the other hand, in the philosophy and progress of science there has been (Huxley)

“—a favourite popular delusion that the scientific enquirer is under a sort of moral obligation to abstain from going beyond that generalization of observed facts that is ‘Baconian’ induction. But anyone who is practically acquainted with scientific work is aware that those who refuse to go beyond the fact—rarely get as far as the fact.”² Von Baer always insisted that the method of science is not peculiar to it, but only a perfected application of our human resources of observation and reflection.³

Suppose we take a little broader viewpoint when looking at our problem. It is of interest to observe the present stage of evolutionary transition in which we find nature in the process of varying degrees of dental slough. Clinically, a great portion of dentistry is devoted to restoring this slough by mechanical attempt. Are we, then, working with or against a natural evolutionary trend in modern civilized man?

It is a relative problem, and as such will require broad cooperative effort. It would be nice to feel wholly secure in the thought that restorative dentistry had reached a high state of development—perhaps it has from a few technical angles—but not so from either a truly scientific or biological standpoint. To begin with, like any other problem that seeks truth pertinent to a part of human existence as a basis upon which to design clinical treatment—it will demand the ultimate in a broad keen sense of all relative factors and their values worked under the tools of science.

If a problem of this character is to be attacked with scientific approach, there must be a scientific method. We note that the great natural scientists

1. Aristotle, *History of Animals*, London: H. G. Bohn Pub. Co., 1862, pp. 1-6;
2. Huxley, T. H., *On Certain Errors Respecting the Heart Attributed to Aristotle*, London: Macmillan and Co., 1886, (Coll. Sci. Memoires), 3:380-392; Osborn, H. F., *From the Greeks to Darwin*, ed. 2. New York: Macmillan Co., 1899, pp. 16-19; Lewis, G. H., *Aristotle, A Chapter in the History of Science*, London: Smith Elder and Co., 1864, pp. 108-113; Whewell, William, *The Philosophy of Discovery*, London: John W. Parker and Son, West Strand, 1860, Chas. IV, V and VI.
2. Huxley, T. H., *The Progress of Science*, London: Macmillan and Co., 1894, Coll. Essays, Vol. 1, p. 62.
3. Woodruff, L. L., *The Development of the Sciences*, New Haven: Yale University Press, 1923, p. 246.

carefully record their observations of natural response using all resources in an attempt to evaluate and balance all relative factors. This procedure is not foreign to us. The biologists have laid hold of the great scientific tools—observation, experimentation, and induction. Their intelligent application is not overwhelmingly manifest in dentistry, and in restorative dentistry in particular—dentistry's broadest application—a study of the order of human response is conspicuously absent. In his introductory to a series of lectures on the Foundations of Zoology, William Keith Brooks states, "I will try to show that life is response to the order of nature—if it be admitted, it follows that biology is the study of response, and that order of nature to which response is made is as well within its province as the study of the living organism which responds—for all the knowledge we can get of both these aspects of nature is needed as a preparation for the study of that relation between them which constitutes life."⁴ Now in the same vein of thought with regard to our restorative dental treatments, we must remember that these treatments are inorganic, and that we are attempting to make them function with organic structures. Consequently, the "— — — success or failure of various restorative treatments depends in the ultimate upon the reaction of the vital tissues to them."⁵

In short, restorative dentistry is trying to solve its treatment problems by the sole application of the laws of physics—now, it would seem to me it must revert and attempt to solve these problems by cooperative effort with the application of the laws of biology. The laws of physics might still prove to be the effective instruments, but at least with some knowledge of response these treatments could be more intelligently applied.

Stanley Tylman very ably refers to the point in the manner following: "Although the objectives of prosthetic dentistry are primarily biological in character, the aims are attainable largely through the application of the basic laws of mechanics and engineering. The concept that restorative dentistry is a procedure based solely upon an understanding and application of mechanical processes is just as untenable as the view which holds that it is entirely biological. It has been established that, in order to make a dental restoration acceptable biologically, its design and construction must also conform to and respect the basic laws of physics, mechanics, and engineering."⁶

Those who are interested in careful investigation in relation to the problem will probably insist upon interrogating nature experimentally and observing the *modus operandi*. In a word, the ideal approach following preliminary might be to construct an account of the living organism and its reactions to restorative dentistry which can be verified by actual observation provided the proper conditions are afforded. The problem is a challenge to constructive thought. The general dental picture of modern man in his so-called civilized environment would suggest that this mechanism is undergoing retrogression that may be progressive with time.⁷

DEFINITION

Regardless of the method we may pursue a basis for correct definition is in order. Physiologically, mastication is a physical force—a function brought about by the dental arches in antagonistic action after a pattern probably generated through the pathways of greatest individual comfort. The reciprocal force of this action is taken up by the supporting tissues of natural teeth. The nature of the sup-

4. Brooks, W. K., *The Foundations of Zoology*, ed. 2, rev., New York, The Columbia University Press, 1915, p. 3.
5. Marjerison, H., *Personal Communications*, 1938.
6. Tylman, Stanley, D., *Crown and Bridge Prosthesis*, 2nd ed., rev., C. V. Mosby Co. 1949, p. 134.
7. Baker, Claude R., *The Problem of Restorative Dentistry*, *Den norske Tannlaegeforenings Tidende*, 57:243 (May) 1947.

port becomes the actual basic fundamental with respect to function and as such would serve, I believe, as a very convenient and correct premise from which to classify dental prosthesis. For example, partial denture substitute has been defined on a basis of technicality concerned with the mechanics of the piece without concern for its actual physiological function—and its function in definition cannot be divorced from the nature of its support. It is high time that we collaborate thought with respect to a basis for reference in the field. I would like to suggest the following: that dental prosthesis, per se, be considered on the basis from which it gains its fundamental support, and classified as to tooth borne prosthesis and as to dental ridge or mucosa prosthesis—not according to whether or not the apparatus design makes allowance for removal by the patient. This later basis for definition, the one which we now employ and endorse, is extremely trying to work with, is a definition of nothing, and is far outmoded for clinical description. It has served to confuse dentists and patients as well and, because of its character, is not scientifically descriptive. It does not suggest functional, actional, directional or other structural implications, but suggests an action irrelevant to science connected with its standard use which retards the advance of this science. Such rewording would carry with it physiological structural implications which, in turn, would suggest further experiments in the search for structure and so have a creative character, not to be disregarded. We might with time through such attitude and study find ourselves called upon to alter the engineering and mechanical principles of our treatments in order to more nearly meet better understood biological requirements. Most fields of science realize that with human progress, the complexities and difficulties in a world increase. Each field

as it progresses with time must integrate with the whole.

Partial dentures might then, under such consideration be classified as to tooth borne types, dental ridge or mucosa borne types, or a combination of the two—compound types. It is obvious that the mucosa borne treatments would often be retained to varying degree by some means of tooth borne design. The retentive mechanism developed as an outgrowth of the application of the basic laws of mechanics and engineering becomes in function an integral part of the treatment because of the nature of the application.

It seems that the human species after contact with so-called civilized environments manifests very early and during development a susceptibility of varying degree to dental caries. The character of the tissue attached is such that it does not regenerate. Exclusive of trauma this disease is largely responsible for the loss of human teeth in the early age brackets. If life is a response to the order of nature could it be that dental caries and its end product, the loss of human teeth, are natural responses? But then we also observe that in some instances dental caries is inactivated by natural hygienic mechanical stimulation. The indurated dark areas of clinically arrested caries is an example. The loss of a tooth constitutes a stimulus that provokes certain natural activities or responses. Natural adjustments ensue that under certain circumstances seem to be disadvantageous and definitely destructive. The prosthetic substitute for this loss also constitutes a stimulus which, if accepted favourably, results in a physiologic response, and the treatment may be considered to be therapeutic.⁸

It is not unlikely that if we conceive and generate our treatments for the loss of dental arch segments from the anticipated support for the masticatory function that there is greater likelihood of biological acceptance in the

8. Baker, Claude R., *Problems in the Restoration of Lost Segments of the Dental Arch*, A Thesis, University of Minnesota Library, 1939, pp. iii and iv.

individual case. The matter of selecting and designing a means of holding it there (the retainers) has been, and is, pretty well worked over.

The loss of any tooth, with the possible exception of the third permanent molars, initiates a number of destructive factors which may impair the function of the dental mechanism as a whole. The extent of damage to the mouth and dental arches is usually individual. The failure to substitute for the loss of a tooth soon after its extraction is best exemplified by the classic clinical picture resulting from the loss of the lower first permanent molar, particularly if the loss occurs in the second decade of life.

The three major conditions that have their inception automatically created by the loss of a single tooth have been reported by Hirschfeld as follows:

1. Loss of continuity of the dental arch.
2. Partial or complete loss of occlusal opposition.
3. Curtailment or complete cessation of local function.

He also tabulated the conditions that may result from these three major factors.⁹ It has been explained and we take cognizance of the fact that as the teeth move cuspal interference is brought about which no doubt contributes to the rotation and inclination of the teeth to the space; and that the effect of this disturbed occlusion resulting from the movement of the teeth is frequently evidenced by gingival tissue disturbance and an increase in the distribution of caries.

Klaffenbach voices general opinion when he states that, "Every patient who has lost one or more teeth, with the exception of the third molars, may be rightly regarded as a 'dental cripple'.

Even the loss of a single tooth, to a certain extent, impairs the function of the mouth, and is the beginning of a vicious circle of oral disease unless replaced by a restoration which fulfils the biologic and physiologic requirements."¹⁰

It might be natural to assume that if a tooth is lost the teeth proximal to the space become subjected to an increased occlusal force in function. This is not true as evidenced by gnathodynamic measurements of periodontal membrane tolerance. Almost immediate natural adaptation to the change brings about a decreased vertical intermaxillary impact in the arch segment involved.^{11, 12, 13, 14} The time factor following the loss of the tooth and subsequent arch collapse is an exceedingly important consideration. This displacement activity on the part of teeth proximal to segmental dental arch loss does not take place as a bodily one parallel with the original axis of the tooth, but rather does it occur as individual tipping or shifting and rotation with subsequent resultant collapse of the overall masticatory picture. This disposition may very often provoke the development of abnormal stresses which manifest themselves by varying degrees of pathologic reaction such as the breakdown of local periodontal support. The value of immediate replacement by means of a fixed appliance has been clinically proven and belongs in the category of preventive health treatment. The periodontist often makes use of this form of therapy. It is also true that various forces and stresses are created in either static or dynamic masticatory function since the occlusal surfaces of teeth may be in contact under various pressure stimuli. We observe that similar stresses or forces or stimuli in one in-

9. Hirschfeld, Isador, The Individual Missing Tooth, J.A.D.A., & D. Cos., 24:67-82 1937.
10. Klaffenbach, O. A., The Role of Crown and Bridge Prosthesis, J.A.D.A., & D. Cos., 25:536, 1938.
11. Klaffenbach, O. A., Gnathodynamics, J.A.D.A., 23:371-82, 1936.
12. Tylman, Stanley, D., Clinical and Radiographic Observations on Fixed and Semi-Fixed Bridge-work, J.A.D.A., 14:379-86, 1927.
13. Hildebrand, G. Y., Studies in Dental Prosthetics, Stockholm, Vol. 1, Chap. 8, p. 237, 1937, A. B. Fahlerantz' Boktryckeri: Intermaxillary Axial Stress Relation, Mandibular Function, and Prosthetic Progress, Norske tannlaegaf. tid. 48:100-106, 1938.
14. Baker, Claude R., Unpublished Report.

dividual may provoke a different reaction or response in another. These might be attributed to individual tissue tolerance. At any event, until there are factual data that may reveal a better understanding of the oral tissue reaction phenomenon to the various stimuli such as brought about by the loss of teeth or introduced by the institution of prosthetic apparatus, this problem will never be understood.

FIXED PARTIAL DENTURE TREATMENT

Our observation of an abundance of fixed partial denture treatment during the past quarter century or so confirms favourable adaptation to these appliances when they exist in harmony and balance with the individual conditions in the light of present knowledge and methods for judgment. Such a statement infers that the mechanical design is adequate and that full attention is given to every technical detail. In most cases if the technical construction is reasonably good and the abutment teeth healthy, the substitute may serve as a health treatment for years. There is no doubt but what the greater the degree of technical excellence, the more favourable the local tissue response. The individual ability of the oral tissue to respond favourably is the other important factor. Nature has evidently provided the processes involved with a reasonable margin of safety. For the most part, these various functions seem to be capable of performing more than they were naturally intended to accomplish.

TOOTH BORNE AND MUCOSA BORNE TYPES

The masticatory mechanism is naturally designed to function throughout all interdigital mandibular excursions as a tooth borne entity. Masticatory substitute receiving whole or partial support from the dental ridge mucosa is unnatural. This is basic fact—a reality—not a hypothesis. Mental interpretation of the forces brought to bear in intermaxillary contact that is tooth borne is real—be they natural or prosthetic. Dental ridge or mucosa

borne prosthesis, because of the nature of its support, necessitates both mental and physical adaptation to a false substitute. This is not a dissertation on “fixed” versus “removable” partial denture construction but rather attempts a clarification of the existent known facts.

Amos S. Wells¹⁵ firmly contends that of all the fundamental factors to be taken under consideration in the construction of fixed partial dentures the most important one is *rigidity*. In parallel agreement from a study of many of the gross factors involved, and clinical observation and experience over a reasonable period of time I would like to record the following representative of a personal viewpoint from deductive reasoning; that, as a treatment the completely rigid tooth borne partial denture offers the most direct, positive, and adequate treatment substitution for the segmental loss of human teeth. This recording is interpolated herein to take issue with the hypothetical ideal that the “broken-stress” mechanical principle should be a part of tooth borne fixed partial dentures and is advantageous because it makes allowance for — the individual natural movement of teeth (the abutments) necessary for the maintenance and preservation of the health of their supporting tissues. Since there are always exceptions the most likely might be clinically exemplified in those instances wherein tooth borne substitution involves the cuspid as an abutment supplying the lateral incisor and employing some type of flexible connector interpolated between the pontic and central incisor. Others would include the selected application of flexible or broken connection between pontic and retainer when the design of the retainer employed was questionable with respect to its ability to retain a tooth borne fixed partial denture.

The term “stress-breaker” is a very poor one as commonly used in relation to tooth borne types of partial denture apparatus, in that it infers that

15. Wells, Dr. Amos, S., Personal Communication.

"stress" is a force inherent in the mechanical makeup and must be relieved. Rigid connection generally is advantageous because:

1. It maintains a state of existent quiescence in the supporting periodontal structures when the arches are out of dental contact.

2. It permits the use of "splint" mechanics so very favourably employed under proper occlusion as a therapy in clinical cases that manifest inability of certain existent potential abutment teeth selections to maintain a healthy supporting environment as individuals. In the latter instance the major causative factor may very often be attributed to the lateral stresses or forces existent in occlusal function.

3. To increase the lateral support of selected abutment teeth by means of rigid connection, and by working the whole under proper occlusion, it becomes a fundamental principle in treatment that is often lost sight of or not considered.

SUMMARY

1. To the average dental practitioner the practical results of applied science are the real tangible things. He too comes to more fully realize that applied science is built on a foundation of pure science, and that it is the foundation and not the superstructure which is in greatest need of strengthening. You cannot apply science until you have science to apply. You cannot build a house until you have a foundation. Crown and Bridge dentistry is a field in clinical technology and one in which progress will soon be stopped—indeed, if it has not already reached that point—unless the foundation of pure science on which it should be built is rapidly and widely extended.

2. We must extend our understanding of nature and its laws—its actionary and reactionary response to the apparatus we create as tooth substitute

before tooth borne partial dentures can be considered in the realm of a science and an art. It would be well to emphasize the timely need for the revision of our concepts and method by endorsing a scientific approach to the problem with which we are directly concerned. The chief obstacle to such progress is probably the very human anachronistic survival of mental habit. It is suggested also that we might start by correctly defining our treatments because we think with words.

3. The biological conception of human dental occlusion centres around the individual's mental interpretation of intermaxillary contact via healthy teeth in a healthy supporting environment. In the earlier age groups of average human life expectancy subjected to our concept of civilized living, tooth tissue degeneration or pathology of various types and degree are manifest. In the event that timely operative procedure is withheld and a tooth or teeth are lost, the tooth borne rigid partial denture substitute is the treatment indicated if continued destruction and dental arch collapse is to be arrested.

In the event that segments of the arch manifest various degrees of collapse or disharmony with resultant mandibular displacement vertically, laterally, or both, properly engineered tooth borne occlusal reconstruction including the partial denture is necessary in order to re-establish function. By so doing the treatment of the condition delegates the rehabilitation of lost dental function to that of a health service.

Tooth borne partial denture prosthesis is the most natural pathway to treatment when physically possible. Partial denture support given to the ridge mucosa in whole or in part wherein natural healthy tooth support is a direct possibility, constitutes, in my opinion, a direct breach of professional integrity in the light of modern dental knowledge.

SOME OBSERVATIONS ON THE DENTAL CONDITIONS IN PEIPING (PEKING) CHINA

by H. C. MAO, D.D.S., Dean, The National Peking University Medical College—
Dental School

DURING the years of 1936 to 1940, when in public health dental service of the first health station of Peiping, I examined 7,208 persons under the program of group surveys. These included both sexes and the ages from 2 to 67. They were chiefly students from kindergarten up to college, and, in addition, there were children from the health station well baby clinic, rug factory workers, school teachers, Y.M.C.A. members, etc. Financially, these people could be classified into three socio-economic groups which are designated as A, B and C. Group A included those in the middle class and above, Group B those somewhat below the middle class and Group C purely factory workers who are financially inferior to the other two groups. There were 5,663 persons in Group A, 788 persons in Group B and 757 persons in Group C.

At the time the examinations were made, living conditions could still be considered as pre-war normal. The diet of Group A generally contained polished rice or refined wheat flour, meat (at least one serving daily), eggs, vegetables, fruits and sweets. Compared to Group A, Group B also had rice or wheat flour (but less refined), less meat (about two or three times a week), just as many vegetables, less fruits and less sweets. In the diet of Group C, rice or wheat flour constituted only a very limited part. Instead, they ate a so-called "combined flour" which is a mixture of millet, corn and soy bean flours. They had meat about once a week, plenty of vegetables during summer and autumn but limited both in variety and quantity during

spring and winter, little fruit and very little, if any, sweets.

The examinations were made with mouth mirrors and explorers exclusively. The diagnosis of an incipient smooth surface carious lesion was made when an area of definite surface decalcification was present. An incipient pit or fissure lesion was diagnosed when the sharpened explorer could be introduced into the defect and some softness could be felt. There was no doubt about the diagnosis of advanced lesions.

The gross picture of caries prevalence shows that the percentage of persons with one or more DMF teeth is 77.8% in Group A, 75% in Group B, and 62.5% in Group C. For the purpose of detailed comparative analysis, the age groups above the age of 31 have been eliminated because the samples they represent are too small. After this elimination, there are left in Group A 5,600 persons, 3,068 males and 2,532 females, aged from 2 to 31; in Group B there are 788 persons, 689 males and 99 females, aged from 2 to 21; in Group C, there are 609 persons, 264 males and 345 females, aged from 12 to 31. (Here I wish to point out the inadequacies of my data. In Group B, samples are wanting for the female in the ages from 12 to 21 and also wanting for both sexes in the ages from 22 to 31. In Group C, samples are wanting in both sexes in ages from 2 to 11.) In the analysis, the data are separated into six age groups each including five years and each related to a developmental stage. The first group including the ages 2 to 6 covers the period of pure deciduous dentition, the second

7 to 11 covers the transitional period of mixed dentition, the third 12 to 16 the pubescent period and the fourth 17 to 21 the adolescent period. The last two groups, 22 to 26 and 27 to 31, include adults. The data have been tabulated and a number of interesting points are being brought out for evaluation.

DENTAL CARIES

The proportion of persons with caries experience seems to reach its highest level in the age group 7-11.

In Group A, this highest level is registered as 85% for both sexes in the 7-11 age group. It falls to a lower level, around 80%, in the 12-16 age group and stays on more or less constantly on that level.

In Group B, the highest level also occurs in the 7-11 age group where it is 90% for the males and 96% for the females. It falls, thereafter, to much lower levels.

This highest level of caries experience in 7-11 age group represents the cumulative effect of caries experience of the deciduous dentition together with some contribution from the permanent first molars also; the fall which occurs in the subsequent age group reveals the caries experience level of the permanent dentition.

Now, if we turn our observation to the percentage of teeth which are DMF and to the number of DMF teeth per person, this similar highest caries experience level we expect to see in the 7-11 age group does not exist. This is because carious deciduous teeth in the 7-11 age are being eliminated through the natural process of replacement and consequently the number of carious deciduous teeth is diminishing. However, the caries experience levels of all the subsequent age groups following 7-11 drop down notably below the levels of the earlier age groups.

From the observations recited above, a few points seem noteworthy. In the first place, since the highest caries experience level occurs in the 7-11 age group and lower levels are seen in the subsequent age groups, we may say

that the deciduous dentition is more susceptible to caries than the permanent dentition. Secondly, since from age group 12-16 and thereafter the caries experience level remains more or less constant without showing notable cumulative effect, two hypotheses may be offered for the explanation: Caries of the permanent dentition progresses exceedingly slowly or it actually stops after certain ages in certain cases; or persons of the older generation are less susceptible to caries than the younger generation.

Caries incidence in Group A is slightly higher than in Group B and definitely higher than in Group C.

However, there are a few discrepancies which may be due to small-sized samples or other sources of error. For example, in the 7-11 age group the percentage of persons with one or more DMF teeth in group B is 90% for males and 96% for females. These figures surmount the corresponding figures, 85% and 85%, in Group A. This may be a true picture of temporality or may be a false shadow cast by errors.

An interesting sex difference in caries incidence is shown in the 17-21 age group.

Below the age of seventeen differences in caries experience between the two sexes are either non-existent or so small that they might easily have occurred by chance. The samples above the age of twenty-two are so small that existing differences may or may not be significant. In the 17-21 age group, however, an interesting phenomenon occurs. In Group A where over 900 individuals were examined caries experience was slightly higher in the males. 82% of the males and 76% of the females showed some caries experience, the difference of 6% being just a little greater than twice its standard error. In Group C, however, caries experience among the females (62%) is definitely higher than that among the males (32%). The difference of 30% is at least four times its standard error and seems fairly significant, yet it is in re-

verse when compared to the difference seen in Group A. Further study would be desirable to determine the reason for such divergent findings in the two groups and whether the divergence continues into the upper age groups over twenty-one.

An analysis combining age groups into two major divisions, one below thirty-two and the other thirty-two and over, has been made.

In Group A, the total percentages of individuals with caries experience of the males and the females in ages 2-31 are both 79% and the total percentages of individuals with caries experience of the males and the females in ages 32-59 are both 70%. In Group C, the percentages of individuals with caries experience are higher in the females in both age groups, 12-31 and 32-67.

This analysis also shows that caries experience appears to decrease after age thirty-two in Group A whereas in Group C it makes a marked increase. In Group A the combined total percentage of caries experience for both sexes in the 2-31 age group is 79%, but the corresponding percentage in the 32-59 age group falls to 70%. Conversely, in Group C, the combined total percentage of caries experience for both sexes in the 12-31 age group is 52% but this figure rises to 73% in the 32-67 age group.

It must be remembered, however, that samples are small in all of the age groups above 32 years. The figures presented, though of doubtful sig-

nificance, indicate a need for future study.

COMPARISON OF CARIES INCIDENCE BETWEEN CHINESE AND AMERICANS

Americans seem to have a definitely higher caries incidence than Chinese, as shown in Table 1. The data for Americans are that of Klein and Palmer separated into age groups comparable to those used by the author.

DENTAL DEPOSITS

The author arbitrarily classifies oral hygiene into four grades. Grade 0 represents mouths perfectly free from all kinds of soft and hard deposits or stains. Grade 1 represents slight traces of deposits, Grade 2 noticeable amount of deposits and Grade 3 unusually heavy deposits. Generally speaking, the author considers mouths with Grades 0 and 1 as distinguishably superior in cleanliness to mouths with Grades 2 and 3.

Comparison between socio-economic group.

While Groups A and B are more or less the same in oral cleanliness, Group A tends to be better than Group C although even here the difference in figures is not very significant.

Comparison between sexes.

In both Group A and Group C, the female is superior to the male in oral cleanliness, probably indicating that women take better care of their mouths than men.

TABLE 1.—DENTAL CARIES
Comparison of Caries Incidence Between Chinese and Americans

Age Group	Chinese (group A)	12-16	17-21	22-26	27-31
	American	12-16	17-19	20-24	25-29
Percent of Persons with one or more DMF Teeth	Chinese (group A)	80	78	84	64
	American	94.3	97.8		
Number of DMF Teeth Per Person	Chinese (group A)	3.0	3.46	3.98	2.6
	American	5.67	8.16	15.82	18.28

Accumulation with age.

As the age groups proceed from young to old, there is a tendency for the larger figures to shift from Grades 0 and 1 to Grades 2 and 3. This trend is observable in all three socio-economic groups and both sexes. It signifies the accumulation of deposits with the advancement of age.

GINGIVITIS

Gingivitis is also classified arbitrarily into four grades. Grade 0 is entirely free from pathological manifestations. Grade 1 indicates the incipient signs of marginal congestion of the gingiva; Grade 2 more marked in symptoms; Grade 3 represents the advanced manifestations of congestion, inflammation, discolouration and texture changes of the gingiva. As a basis for comparison, the author considers the mouths of Grades 0 and 1 as distinguishably superior to the mouths of Grades 2 and 3.

Comparison between socio-economic groups.

Group C is significantly more advanced in gingivitis than either Group A or Group B while the latter two are about the same.

Comparison between sexes.

In Groups A and B, the difference in the advancement of gingivitis between the male and the female is insignificant. However, in Group C, gingivitis is significantly more advanced in males than in females.

Advancement with age.

As the age groups proceed from young to old, there is a shift of the figures from Grades 0 to 1 to Grades 2 and 3. This is seen in all three socio-economic groups and both sexes.

PERIODONTOKLASIA

A diagnosis of periodontoclasia was made when a tooth was found loosened, with periodontal pocket and with traces of purulent discharge.

Inauguration.

In Group A, periodontoclasia starts

to manifest itself with the age group 12-16. In Group B, it makes an early start with the age group 2-6 and continues on thereafter. Unfortunately the late part of Group B and the early part of Group C are not seen.

Comparison between socio-economic groups.

The differences are not significantly shown.

Comparison between sexes.

The differences are not significantly shown.

Different age groups.

An analysis combining age groups into two major divisions, one below age 32 and the other 32 and over, has been made.

If we compare the younger age group to the elder age group, the advancement of this disease in harmony with the age groups can be plainly seen. This is noticeable in both socio-economic groups, A and C, and also in both sexes.

Probably, we can also point out a tendency indicating that Group C is more susceptible than Group A although the age divisions are not quite comparable.

Teeth affected by periodontoclasia.

A comparative analysis has been made to show the percentage of the different groups of teeth affected by periodontoclasia. According to the results, a few points can be mentioned:

- 1) Group B shows conditions among the deciduous teeth; Groups A and C among the permanent teeth.
- 2) In permanent dentition, lower teeth seem to have higher susceptibility than the upper teeth.
- 3) In permanent dentition, there seems to be a symmetric distribution of affected teeth between right and left sides.
- 4) In both Groups A and C, the lower central incisors are the leading tooth groups in prevalence; the upper and lower canines and third molars are the last. The distribu-

tion among other tooth groups is also interestingly consistent.

SUMMARY

7,208 persons, including different socio-economic groups, both sexes and ages from 2 to 67, were examined in Peiping during the years of 1936 to

1940. Dental conditions are compared between socio-economic groups, sex groups and age groups. Also a comparison of caries prevalence has been made between Chinese and Americans.

REFERENCE

Klein, Henry and Palmer, Carrol E., "The Epidemiology of Dental Caries"—University of Pennsylvania.

Résumé

7208 personnes de différentes classes sociales, des deux sexes et d'âge variant entre 2 et 67 ans, furent examinées à Peiping, entre 1936 et 1940. L'état buccal de ces gens est étudié en rapport avec le niveau social, le sexe et l'âge. Une comparaison entre les incidences des caries, chez les Chinois et les Américains, furent entreprise. Il a été constaté que les Américains souffrent plus de la carie dentaire que les Chinois.

ANNOUNCEMENT

GRADUATE AND POSTGRADUATE COURSES,
UNIVERSITY OF MONTREAL
1950-1951

SUBJECTS	DATES	DURATION	ENROLMENT
Oral Surgery & Anesthesia	Nov. 6 to 10, Thoma & Seldin and staff, 1950	1 week	30
	Feb. 5,6,13,14 & 15, 1951	5 days	10
	March 5,6,13,14 & 15, 1951	5 days	10
	April 23 to 28, 1951	1 week	12
	Sept. 50/June 51	1 year	3
Endodontics	Nov. 7,14 and 21, 1950	3 days	6
	Jan. 15 to 20, 1951	1 week	12
	May 8,15 and 22, 1951	3 days	6
Orthodontics	Sept. 50/Sept. 51	1 year	10
	June 25 to 30, Dr. Jos. E. Johnson and staff, 1951	1 week	30
Prosthetics	Nov. 13 to 18, 1950	1 week	5
	Dec. 4 to 9, 1950	1 week	5
	Jan. 15 to 20, 1951	1 week	5
	Feb. 5 to 10, 1951	1 week	5
	March 5 to 10, 1951	1 week	5
Pedodontics	Jan. 23,24,25 & 26, 1951	4 days	8
	April 10,11,12,13, 1951	4 days	8
Diagnosis	Feb. 5 to 10, 1951	5 days	15
Periodontics	March 12 to 17, 1951	5 days	15
	Feb. 5 to 9, 1951	5 days	8

Generally speaking, short articles are harder to write than long ones. Obviously, it is infinitely easier to write down everything that pops into one's mind than it is to do a job of selection. And, of course, short articles are more apt to be read than long ones. Perhaps the worst sin a writer can commit is to fill his article with tiresome statements concerning something that everybody knows about anyway. Readers, nowadays, are looking for the new, the significant, and the important and skip everything else.—From Editorial in F. Rev. of Chic. D. Soc.

OPERATIVE DENTISTRY FOR CHILDREN UNDER GENERAL ANAESTHESIA*

by Dr. C. C. BOURNE, Montreal, Quebec

LOCAL HISTORY

In the minutes of the Montreal Dental Club for 1911, it is recorded that a clinic was given demonstrating the filling of teeth under general anaesthesia.

A few months ago, Dr. Wesley Bourne told me that around 1914 a number of dentists filled teeth under general anaesthesia, so much so that some months, one-half of his income was from giving anaesthetics for dental filling cases. On another occasion while speaking to Dr. Charlie Moore, he told me he had done a few cases about twenty years ago.

Recently I had occasion to admire some excellent dental work in a patient's mouth and was told that it was done about 10 years ago by a Dr. Vance while the patient was under a general anaesthetic.

These references should show that the idea of operative dentistry under general anaesthesia is not new. But it was new to me when the subject was first suggested in 1943-44.

PRELIMINARY

Visual and x-ray examination, and models in some cases, are necessary as a matter of record, but essentially to plan a sequence of procedure.

Assess reliability of parents. Is it safe to depend on such parents for co-operation, or is hospitalization preferable?

Consider size of patient and mental equipment. Under influence of a fairly strong dose of barbiturate an eleven-year-old spastic child may need two people to carry the patient to the office: such a patient would be better alone in the hospital, while a five-year-old would not present such a problem.

ARMAMENTARIUM

Light—Suction—Air—Dental unit or at least dental motor, mirror, college plier, explorer, cotton pellets, cotton rolls, throat packs, enamel chisel, excavator, amalgam dispenser, mortar and pestle, amalgam gun, amalgam plugger, amalgam carving instrument, cement, oil of cloves, zinc oxide, cavity lining varnish, contra angle, (children under 5 use miniature contra angle). Burs: $\frac{1}{2}$, 2, 4, 6, 700, 557, 559.

(Mounted in a small bur block: For children under 5 use miniature burs), mouth gags, suction tips, operating table or horizontal position in dental chair.

Patient is given a barbiturate the night before operation. A fasting period of 4 hours before operation is necessary. Patient is taken to the bathroom just before operation. Patient has sedative so someone should be in attendance.

Anaesthetic induction by anaesthetist or anaesthetic group. (See article in CDA Journal April, 1950, by Dr. R. Stephen.)

OPERATIVE PROCEDURE

Place mouth gag and throat pack firmly in place. Then, following your plan of procedure, start at upper posterior and cut each tooth of upper jaw which needs attention with a $\frac{1}{2}$ bur, go to lower posterior and work forward to midline. Change the bur for the next larger and repeat through the large round burs. With the fissure burs obtain the proper outline form. Have the assistant keep the air directed on the tooth being cut. When cavity form is satisfactory, remove the remaining decay usually with a moderate sized round bur or excavator.

*Presented at the Children's Dental Health Day, May 13, 1950.

Try the matrix on the tooth, if one is necessary, and make sure it will stay in place, then remove it.

Toilet of cavity: I like a thorough wash with peroxide, then phenol followed with 95% alcohol. Saliva is absent so we frequently complete the toilet of more than one cavity at a time.

Place cement or zinc oxide lining.

Replace matrix.

Insert amalgam.

When adjacent amalgam fillings have to be placed one after the other, I separate by painting the inserted amalgam with cavity lining varnish—formerly I used a thin mix of zinc oxide and oil of cloves as a separating medium.

When fillings on one side are completed, carefully suck out all of the debris. Take the tip of the regular throat suction and use it as a vacuum cleaner.

The anaesthetist acts as a check on this, he will look in the throat to see if there is any debris which might get into the lungs.

When first side is completed except for extractions which are left till last, change the mouth gag and repeat on the other side.

Before any extractions, the throat packs should be removed and the throat again inspected for debris, then repack and carry on with extractions.

Post-operative instructions: Given by the anaesthetist.

Caution parents that the child should return to his dentist in two weeks to have the fillings polished.

There is definite need of this service for children with disturbed nervous systems. Regrettable as it may be, there are a few spastic children in each large community. These cases have

not sufficient predictable control of their muscles to allow ordinary office dentistry. There are also a few children with nervous systems which with age become normal, but at age 5 are still beyond dental treatment. A further, but lesser group of child patients are those due to a wide variety of infrequent nervous diseases. All these I would classify as the group which needs some such method.

In contrast to the above small group, there is a large group where this method is the method of convenience:

- (a) Children who are confined to bed for long intervals as cardiac cases.
- (b) Children requiring a large number of fillings.
- (c) Children who have no intention of co-operating with the dentist.
- (d) Children living in communities with no dentist who must come to town for their dentistry.
- (e) Children coming to hospital for treatment who must have the teeth put in order before their operation can be undertaken, as in some cases of harelip or cleft palate.

LIMITATIONS

- 1—Only possible where well-trained anaesthetists are available.
 - 2—Expensive—probably not possible to reduce fees below \$50.00.
 - 3—It is not possible to save a large number of hopelessly decayed teeth at one time. The most expert take ½ hour to complete one pulpotomy. Would suggest 5 completed fillings in one hour an excellent first attempt.
 - 4—Procedure is almost identical to normal, except patient is in horizontal position and not able to spit.
- 1414 Drummond Street.

Choose your help carefully. Remember you did not learn dentistry in two weeks, so why expect a girl to do so? Good help is always worth the salary; poor help is never worth half what you pay. Train your girls thoroughly in the duties you wish them to perform. Turn over the duties to them that they can perform. Give definite responsibilities and you may expect good service.—Dr. R. C. Curry in W. Virginia D. Jour.

The Forum

SOCIALIZED MEDICINE

Does It Lead to a Never-Never Land?

The following is an excerpt from a lecture delivered by Governor Thomas E. Dewey, of New York, at Princeton University, April 13.

Everybody wants good health, good doctors, good hospitals and good public health services. To this extent the nation's health is non-political and non-controversial.

Some additional areas are non-controversial. For more than a century in this country, beginning with the crude "insane asylums," the states have accepted an obligation to provide hospitals for the mentally ill. This is a pretty big obligation. In New York state, more than one-third of the entire operating budget of the state itself, \$106 million to be exact, is spent on hospitals for our 105,000 mental patients.

In most states, the care of victims of tuberculosis is also a state obligation because if the patient circulates in the community, he may endanger the health of others. Public health services involving purity of water supplies, effective sewage disposal, visiting nurse service and the like, are also in the field of public obligation. All these services are comparatively non-controversial.

But the administration is making a strong political issue in support of a compulsory national health bill requiring comprehensive sickness insurance. By this bill, heavy additional payroll deductions or comparable taxes would be imposed on the entire population. Everyone would then get so-called "free" medical, dental, surgi-

cal and hospital care, as in Great Britain. Mr. Truman says this is not socialized medicine. The British admit that it is. They ought to know.

Of course there are urgent problems still to be met in the field of medical care. There always will be. Many communities need hospitals. The cost of illness can often be disastrous to an individual or family. Medical schools are having a tough time meeting their budgets—as who is not? In many areas we could use more doctors and dentists.

But to leap from these admissions to the conclusion that socialized medicine is the only cure, is like cutting off your head because you have a headache.

Let's take a sober look at where we are before we jump into the never-never land.

The simple fact is that American medicine is today the finest in history. Our entirely free medical profession and its allied scientists have conquered scourges such as diphtheria, smallpox, typhoid and scarlet fever, which once wreaked terror over whole nations. Even pneumonia is on its way out as a killer, and significant progress has been made with such stubborn problems as leprosy, infantile paralysis, heart disease and cancer.

The life expectancy of Americans has been increased 20 years in just the past half century. In the last third of a century the rate of infant mortality has been cut by three-quarters. Insofar as medical personnel is concerned, we have more doctors per capita than

any other great nation in the world.

We should take a good and profoundly grateful look at what our devoted free doctors and scientists have achieved for us before we follow Mr. Truman in forcing them into a government strait jacket through political medicine.

I cannot prove that compulsory medicine is the keystone of the arch of a totalitarian state, but Lenin said that it was, and he was an expert on the subject.

I have one other bit of testimony to offer on this subject. In 1945, I asked the legislature of the state of New York for authority to appoint a commission of 19 members to make a complete and exhaustive study, looking toward a solution of the problems of medical care. With a \$200,000 appropriation available, experience from all over the world was studied for two years.

The more the research was studied, the more apparent it became that any compulsory health insurance program was utterly unworkable, would be financially catastrophic and would wreck the standards of medical care in the state.

I believe we must similarly reject compulsory medical insurance on a national scale because:

1. The program would destroy the freedom of the healing professions.

2. Wherever it has been tried, the guaranteed freedom of choice of physician by the patient is an illusory promise. All patients wish to inundate the offices of the best doctors, leaving empty the offices of the lesser figures. The government ends up by compelling the mathematical distribution of patients among the doctors.

3. Socialized medicine threatens to destroy the greatest safeguard for family health and life—the family doctor. English general practitioners report that this is one of the effects of socialized medicine in Britain where the average patient receives only three minutes of attention because the doctor's time is taken up by the malinger-

er, the hypochondriac and the filling out of government forms. A federal clinic where you are compelled to stand in line to be processed by a government paid practitioner is no substitute for the doctor who knows all about you and yours and who is your counsellor and friend as well as your physician.

4. There is no reliable body of facts on the total health needs of this nation on which to base a law even if one were feasible.

5. The proposed scheme commits the basic error of every big government program of lumping all people into the same basket and making a number of every American. There are many who are able to take care of their own medical needs and they want to. There are others who are wholly or partly dependent upon public aid. Then there is the vast group to which most of us belong and our needs can and must be met by other means without forcing us into a common mould.

6. The scheme is entirely unmanageable financially. If estimated costs are adequate, and I doubt it, and if coverage is limited to those who can be reached by payroll taxes, which is not complete coverage at all, the cost would still be \$12 billion a year. The proposed payroll taxes would only yield \$6 billion, so at least another \$6 billion would have to come from the general revenues of the Treasury. If the compulsory health scheme is to cover all of our people, including those who are not covered by payroll deductions, the Treasury contributed would have to be at least \$9 billion, thereby almost trebling the present deficit.

Furthermore, the program would put an estimated 60,000 to 100,000 new people on the public payroll to run the program. This large new body of government employees would not be doctors or nurses but people taken out of productive life.

7. Finally, we should reject compulsory health insurance because there are better methods to accomplish the

objectives. And we can keep our freedom in the process.

First, the voluntary plans are steadily liberalizing enrolment requirements and more and more individuals who are not members of groups are enabled to join. This must be speeded up so that the self-employed, the farmers, and all others are eligible.

Second, there must be counter-education to meet the cumulative impact of constant speeches and press releases put out by politically-minded employees of the federal government. To foster sound public education, I sincerely hope there will be an organized nationwide effort. Perhaps the newly formed Health Information Foundation can undertake this vital task. It offers

great hopes of intelligent leadership in this field.

We can meet our criteria of what is good for the country, through voluntary programs, avoiding nationalization of our great medical profession, avoiding the addition of a new army to the federal payroll, avoiding new billions in federal deficits and new regimentation for the American people.

Most important of all, we can keep the healing arts free and by continuing to expand hospitals, clinics, medical education and voluntary plans, we will maintain the steady march of progress in this, the most advanced nation of the world in medical care. —Wall Street Jour. per Jour. Missouri State D. Assoc.

THE LABORATORY TECHNICIAN CANNOT PRACTISE DENTISTRY

Editorial in N. Y. State D. Jour., July, 1950.

Recently a woman walked into the office of an exodontist, accompanied by a man. They both stated that she wished certain teeth removed. The case was one which obviously required the removal of the teeth in question. The exodontist extracted them under gas-oxygen anaesthesia and then sent the patient to a retiring room. The man accompanied her and inserted an immediate denture in the patient's mouth. The exodontist, greatly shocked, asked him if he was a dentist. He said, "No, a laboratory technician."

This is only one of a number of experiences which are brought to the attention of the Editor from time to time of the manner in which certain laboratory technicians are illicitly practising dentistry.

Missing teeth cannot be replaced as though they were burned out light bulbs in an electric sign. The public must be made to realize for its own good that a technician cannot be trusted to furnish dentures which will cause no harm to the soft tissues and undue bone resorption.

A denture constructed on purely me-

chanical principles gives the patient a persistent, uncomfortable feeling of having something foreign in the mouth. In fact, often this feeling is so marked that he never can become accustomed to the denture nor use it to masticate properly. Some involved physiologic principle has been disregarded. The patient is chronically uncomfortable—a dental cripple, who is as conscious of his denture as he would be of a wooden leg.

The difference between dentures constructed on physiologic and those constructed on solely mechanical principles can be compared with two different types of shoes, *viz.* a pair of well-fitting leather walking shoes and a pair of wooden ones. The wearer is able to walk in wooden shoes but never comfortably and it will take a lifetime to become completely accustomed to them. On the other hand, with well-fitting leather shoes, he is soon able to run and, in a short time, forgets them entirely.

A knowledge of the temporomandibular articulation is essential in full denture construction for the purpose of

restoring the mouth physiologically. Anatomy, histopathology, bacteriology and other sciences are important in this particular field.

The intricate relationship of the biologic sciences to dentistry is convincing

proof that men trained only in the techniques of denture construction cannot diagnose oral conditions nor take impressions for prosthetic reconstructions without danger to the health and comfort of the public.—C. F. B.

RESULTS OF EXPERIMENTAL CARIES

by H. EGGERS LURA, Holbaek, Denmark

Summary of paper in Tandlaegebladet, March, 1950.

The most important results of the past decade from experimental caries in apes, rats, cotton rats and Syrian hamsters are discussed from a biological viewpoint.

A summary of the most important facts derived from the experimental caries is given as follows:

1. A refined carbohydrate food poor in organic phosphate (rice meal, corn meal, sucrose, confectioner's sugar) facilitates the development of caries.
2. A carbohydrate food, containing organic phosphate (starch and dextrin containing amylopektin) retards the caries development.
3. Kasein, milk, yeast and other food-stuffs containing protein and organic phosphate has a protecting effect against caries. To a minor degree the same is valid for the fats which facilitate the assimilation of phosphorus.
4. The growth-promoting action of the food has no relation to caries activity. The appetite, digestion, utilization and oxidation of the food on the other hand are of great importance to the caries activity. If the

food is given ad libitum a greater incidence of caries can be noted than if the food was rationed.

5. Lactic acid added to the food does not accelerate the caries activity. Nor do the lactobacilli promote the Caries activity more than other types of bacterie f.i. gram-positive proteolytic cocci which are found in great abundance in the caries picture.
6. Fluor and mono-iodo acetic acid which inhibit the acid synthesizing phosphatases and the oxidizing enzymes, but not the mineralizing alkaline bone phosphatases have an inhibiting effect on the caries activity.
7. Cadmium, magnesium and citrates which activate several synthesizing enzymes also accelerate the caries activity.
8. Desalivation promotes the development of caries.
9. Certain endocrine factors may influence the caries picture.
10. The cariogenic effect of certain diets may be transmitted to the offspring by a hereditary disposition.

THE PERIODONTIST'S VIEW OF OCCLUSION

by SAMUEL CHARLES MILLER, D.D.S., F.A.C.D., F.A.D.M.

Excerpt from Jour. of D. Medicine, July, 1950.

The orthodontist can no longer be satisfied with simple alignment of the teeth to please a doting mother. He must establish a functional, harmoniously stable, occlusion which will with regular dental care carry through to the age of 70. In many cases he can

only do this if the form of the teeth, as well as their position, is modified so that future stresses will not become strains. He must also consider habits, nutrition and all the other systemic and local factors which may unite to invite early disease and loss of teeth.

ARE THE COSTS OF MEDICAL AND DENTAL CARE TOO HIGH?

by LLOYD H. DODD, D.D.S., Decatur, Illinois

Condensed from F. Rev. of Chicago D. Soc., July 15, 1950

Out of Proportion: Reports from the U.S. Department of Commerce, the *Encyclopedia Britannica* and the Committee on Economics and the Council on Dental Health of the American Dental Association were the sources of the following data on expenditures by the American people. Figures are for the year 1946, but the proportions are just about the same today.

These figures show that Americans spend a little more than 22 times as much for luxuries and nonessentials as they spend to protect their dental health.

It is unfortunate, but true, that many patients who respect the professional skill of the dentist will ridicule his business ability. For many years there prevailed a widespread belief that if the dentist served his patient in a competent manner, he would automatically be successful without paying any attention whatsoever to the financial side of his practice.

The result of the practical application of this policy was that many a dentist and his wife and family have

had to pass their last days in want and the dentist gave not only his life and talents but the lives of his dear ones as well.

Today a dentist can, through common sense business methods which will not jeopardize his ethical standing, eliminate much of the financial insecurity known in the past and at the same time further enhance the possibilities of his professional success.

One of the most important elements the dentist should consider in his economic program is the elimination of the dishonest and irresponsible people and this can be accomplished by the proper use of credit information.

Let it be strictly understood that this paper in no manner reflects on those honest persons who might happen to be classed in the low income group.

Certainly no dentist would deprive a patient of emergency care for want of a credit report. But, in the average case, a credit report is necessary. It is a kind of financial diagnosis. It enables the professional man to decide how the patient should be handled.

BRINGING ORTHODONTICS TO THE SCHOOL CHILD

by G. E. M. HALLETT, F.D.S.R.C.S. Eng.,
H.D.D. Edin., L.D.S. Liv.

Reader in Children's Dentistry, University of Durham
Conclusions of paper in Br. D. Jour., April 21, 1950.

Four hundred fully trained and fully occupied orthodontists could deal with the main part of the population's malocclusion.

The other attack upon this problem is the preventive one. Children's dentistry carried out in its fullest sense, as it should be, embraces diagnosis of incipient malocclusion, conservation of teeth at an early stage of decay (in itself an important malocclusion preventive for certain forms of irregularity), and the treatment by the public dental officer of simpler forms of irregularity which may be easily corrected in a

matter of a few months. This leaves the more difficult forms of treatment for the specialists. It is of course essential, for the full value of this preventive service to be obtained, that the school dental officer be not only fully trained, but also shall have done a post-graduate course in children's dentistry.

Application

- (1) The School Dental Service, accurate diagnosis, preventive methods and treatment of simple irregularities.
- (2) The specialist.

Specialists work most economically in small groups. They thus share technical (mechanical), radiographic and other personnel. In especially difficult cases there is the advantage of a second opinion being available—and, apart from this, discussion keeps the mind active and away from the dangers of becoming unreceptive to progress. In densely populated areas—they should work in an orthodontic

centre. In less densely populated areas an orthodontist may have to work on his own at some convenient central place.

In sparsely populated areas he may have to visit centres by car but this is the most wasteful method, much time being lost travelling, assembling apparatus, etc. He will still need a central laboratory and surgery of his own.

AN HISTOLOGIC STUDY OF GINGIVA EXPOSED TO AN AMMONIATED DENTIFRICE

by WILLIAM LEFKOWITZ, D.D.S. and DAVID TANCHESTER, D.D.S., New York, N.Y.

Condensed from N. Y. State Jour., July, 1950.

The introduction of ammoniated dentifrices for the purpose of reducing the incidence of dental caries presupposed that the medication has no deleterious effect on the oral mucous membrane. The following investigation was made prior to caries study using an ammoniated dentifrice on a group of children. The investigators were reluctant to use the medicated dentifrice unless they had some assurance that no deleterious changes would be produced in the soft tissue of the oral cavity. Eighteen patients volunteered for this investigation.

In the changes such as noted, there is no distinct trend which might be attributed to the application of the medicated tooth paste. Variations in

the thickness of the stratum corneum were found. At times the pre-test section showed increased thickness, and in other cases the post-test biopsy did. Most significant is the histological similarity of most of the cases. There was little change in the pre- and post-test biopsies. It may be briefly stated that the results of the histological examination of gingival biopsies before and after application of an ammoniated tooth paste containing 13 per cent urea and 3 per cent dibasic ammonium phosphate for 30 days shows no evidence of irritation which could be attributed to the tooth paste. Variations between pre- and post-test specimens fall within the normal range of variation to be expected from biopsies taken at an interval of 30 days.

OCCLUSION—THE ORTHODONTIC POINT OF VIEW.

by SAMUEL HEMLEY, D.D.S., F.A.C.D., New York, N.Y.

Conclusions of paper in Jour. of D. Medicine, July, 1950.

A most interesting fact regarding this entire discussion is that the public and the profession both are cognizant of the variations in occlusion. This is evidenced when patients who require artificial dentures request that some of the artificial teeth be rotated somewhat so that the teeth might look natural and if the patient does not make the request, the dentist will most likely make the suggestion. However, when these same patients bring their

children or grandchildren to the orthodontist, or when the dentist refers children for orthodontic treatment, it is expected that the result will be an absolutely perfect alignment with no trace of a rotation and no variation in the overbite or procumbency of incisors. In other words, it seems that we often think, fallaciously, that we can alter the ways of Nature; in this instance, it is desired to make the natural teeth look artificial and the artificial teeth look natural.



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Editorial

SUCCESS IN DENTISTRY

Success in the minds of most people is the accomplishment of the end aimed at. That aim may be the attainment of wealth, or fame, or position, the ideal family life, travel, or, some would say that the only satisfying life is a life of service, that riches are quite secondary, that there is a supreme nobility in choosing poverty. Many great scientists and research workers have refused riches in order to aid mankind and better the world.

Dr. Cecil H. Bliss of Sioux City, Iowa, in a course given before the California State Dental Association, under the auspices of the Postgraduate Instruction Committee, sets forth the following requirements for success in a dental practice: 1. Have the necessities of life. 2. Have some of the luxuries of life. 3. Provide adequately for your retirement. 4. Provide for the care and education of your children. 5. Be happy in your work. 6. Rise above mediocrity. 7. Have a realistic attitude toward your practice. Doctor Bliss pointed out that success in dentistry is dependent to a greater extent upon personality than upon technical ability. He states that 85 per cent of success depends upon personal qualities and 15 per cent on technical ability.

The following ten commandments were offered as a rule in developing a pleasing personality and attaining success in our practice: 1. Be capable. 2. Tell the truth. 3. Be agreeable. 4. Don't argue. 5. Don't criticize. 6. Don't be egotistical. 7. Remember names and faces. 8. Make it plain. 9. Think success. 10. Be human, be kind.

To some these attributes come as naturally as do day and night. To some only hard work will bring about their reality, while to some others they are never acquired and success is but a phantom or apparition never to be obtained even though earnestly sought after, if I am to judge from some of the letters I have received from dentists of many years' experience, seeking advice about some of the fundamentals of successful dental practice.

In pondering this problem one wonders whether or not more might be done in selecting students for the freshman year of our colleges, men and women who are endowed with the essential attributes which make for success. It is apparent that much thought is being given the matter and to this end aptitude tests will be required of nearly all applicants to schools of dentistry in the U.S.A. Forty of the nation's forty-one dental schools have asked to be included in the program. Of an estimated 12,000 persons expected to file application for admittance to dental schools this year in the U.S.A. it is expected that some 8,000 will take aptitude tests.

Here in Canada this procedure is not a generally accepted procedure. Dean Hamilton states that the University of Alberta has had the matter under consideration for many years but that the difficulty is to find a test which is reliable and applicable to dentists.

Dean Ellis of the University of Toronto states that in 1941 this Faculty instituted a program of aptitude tests for incoming dental students. These tests were essentially of a manual nature and for the first few years required three days to complete. These tests were continued until one year ago. In about 1946 a survey of the results achieved was made which survey indicated that of the three factors, namely, academic qualifications, the result of a personal interview, and the manual dexterity tests, they were reliable in this order. As a result less reliance has been placed upon aptitude tests of a strictly manual nature and for the present freshman class the manual test was eliminated. Dean Ellis believes that the most reliable admission tests would be those devised on a basis to include manual projects, psychological reaction tests and general information obtained by a personal interview, together with the academic standing of the candidate.

Dean Charron of the University of Montreal has under observation the results of experience in other Faculties in America.

Dean Mowry of McGill University reports that this university has been using aptitude tests for the past four years. The test consists of drawing diagrams of figures; listing contents of tray; moulding plasticine figures; bending wire figures from pattern; carving plaster figures from pattern; carving plaster figures from instruction; assembling nuts and bolts; colour test, personal interview, etc. Academic standing is also given consideration.

Dean Bagnall of Dalhousie University states that tests are not used in this University and that he cannot conceive of any type of test which would be of material assistance to use in selecting students. He feels that a number of these tests seem to be designed to determine the candidate's manual ability

and that too much stress has been placed on manual dexterity for dentistry, that most students have no great difficulty in learning to use their hands reasonably well. Dr. Bagnall feels that the first point to be decided is what qualifications are necessary. He believes they would be the same as those required in any professional or business position—personality, interest, drive, a measure of good health, etc., that a most important thing is to have the ability and honesty to carry out any piece of work with neatness and a pride in the finished result; that you cannot make a good dentist out of a careless person no matter how desirable his other qualifications. Dean Bagnall points out also that it is possible to weed some men out at the preliminary interview but that individuals have a habit of turning out either better or worse than was expected and so he is very doubtful whether or not aptitude tests could weed out more than the obvious misfit.

In an editorial appearing in the August 1950 issue of Dental Magazine and Oral Topics the following appears: "Mind does triumph over matter in a remarkable manner and there are many instances of great men whose ultimate capacity might have been lost to the world if they had been obliged to submit to an 'aptitude test'; however it is arguable that for the world's sake, it is more important that the many misfits should be avoided, rather than one possible genius should be given the correct start, that *he* will probably get where he is going in any event."

However, whether or not aptitude tests are here to stay and whether or not they will accomplish what is expected of them, we do know that there are a considerable number of dentists in practice today who either have low ideals as to what constitutes success or else need some help to reach their ideals.

In an article in a recent issue of Fortune magazine it is stated that tests for aptitudes and skills can only partially predict a man's ability to succeed, for psychologists have discovered that perhaps eight out of ten job failures were caused by lack of interest or weakness in the personality, and so industrial psychologists are relying more and more on "interest" and "personality" tests of which there are a great variety.

It is significant, states Fortune, that many companies have begun to experiment psychologically on their supervisors and top executives. They are beginning to realize that many of their business troubles come directly from weakness in their own personalities and so by exposing themselves to psychological diagnosis they are learning not only what their troubles are, but also how to make the most of their abilities.

It is stated that tests can cut turnover and save training costs which may run from \$200.00 for an office worker to \$2,000.00 for an insurance salesman. A fundamental problem is to discover what actually are the qualities or traits that make for success or failures in any particular industry, or profession.

Some executives fail for not giving themselves time to think, usually through failure to delegate responsibility, and how true this is of many den-

tists. Dentists should be trained thoroughly in our colleges as to how to utilize the services of auxiliary helpers.

Would that we had an x-ray which could reveal the basic strengths and weaknesses in the structure of our personality. If tests bear fruit and dentists grow wiser, the whole profession profits enormously.

According to Harvard's Professor Murray, the successful executive exhibits eleven definite traits. A few of them have their obvious application to the successful practice of dentistry: (1) Primarily motivated by the sheer accomplishment of work; (2) Has strong drive towards achievement first, then toward material rewards and prestige; (3) Can organize events and facts and see the relationship that tie them together; (4) Is decisive, either on the spot or after detailed consideration; (5) Has firm conviction, knows what he is, what he wants, and has well-developed techniques for getting what he wants; (6) Has a constant drive to be moving and doing things.

It is not the intention to elaborate upon these points, however one might mention a few practical considerations. Last month's editorial in this *Journal* called attention to the necessity of taking time to think, to watch oneself go by, so to speak. One must take time to study one's problems. It has been said that no great work in literature or science was ever wrought by a man who did not love solitude.

Then a most important practical point is a study of how to convince patients that they not only need, but want, the type of dental service one advises. It is stated that almost one adult in every two have not been to a dentist within the last ten years and an innumerable number who do come do not subscribe to the service suggested because we fail in our presentation. Dr. Cecil H. Bliss already referred to points out in the *Journal of the Missouri State Dental Association* that the most serious difficulties encountered by a dentist in the operation of his practice is the finding of ways and means of obtaining a wider and more cheerful public acceptance of the scientific advancement we have made thus far, that in this extremely practical world the regrettable truth is that many times even excellence must fight for attention. He points out that everything must be sold, that there is a vast difference between a "want" and a "need," that many may need a thing and never buy it, that a man may solemnly declare he cannot afford dental service, even though he drove to the office in a new car. It would be very enlightening, says Dr. Bliss, if every dentist would have his assistant take down his next presentation of a dental problem to a patient in shorthand, then have it read to him after the patient leaves; that most everyone would be surprised, if not shocked, to hear what had just been said. He points out the great importance that national advertisers place upon the choice of words in selling their products, for example, that a shampoo is not merely to "wash" your hair—it is to "glorify" your hair, so we should use great care in the presentation of our case. Joseph Conrad, the English novelist, was asked how he made his livelihood, and he replied, "I am a dealer in words, and words are, of course, the most powerful drug used by mankind. Give me the right word

and the right accent and I will move the world." In closing Dr. Bliss states that the modern dentist of today must realize that the man who perfects himself in the art of handling men has no limit to his possibilities for advancement in his chosen field. But the man who perfects himself in the use of instruments and materials alone will seldom rise above the position of a skilled artisan.

However, we must admit after all these considerations that while a man may be endowed with all the natural graces and with a superb intellect, yet without integrity of character he will eventually fail miserably. Remember the words of Joseph when accosted by the wife of Potiphar, captain of Pharaoh's guard, "How can I do this great wickedness and sin against God?" For a time this action placed him in prison but later brought him practically to the throne of Egypt. Such are the rewards even in dentistry of integrity of character.

M.H.G.

ROYAL CANADIAN DENTAL CORPS NEWS

- (1) Colonel E. M. Wansbrough, Director General Dental Services, attended the recent meeting of the Defence Dental Association held in Winnipeg, Man., on September 22, 1950.
- (2) On August 22, 1950, a Defence Department publicity release was made, calling for female dental assistants for the R.C.D.C. The dental nurses would retain their civilian status and be employed through the Civil Service Commission.
- (3) The R.C.D.C. participated in the Army Week held 17 Sept.—24 Sept. 1950 by exhibiting new dental equipment in all Army Commands throughout Canada.
- (4) At the recent meeting of the Armed Forces Field Medical Materiel Group held in Montreal, the following Senior Dental Officers attended: Major General Walter D. Love, Chief of Dental Division, U.S. Army; Major General George R. Kennebeck, Chief of Dental Division, U.S. Air Force.

NEWS FROM THE PROVINCES

ALBERTA

The first regular meeting of the **Edmonton and District Dental Society** for the 1950-51 season was held at the MacDonald Hotel on October 3.

The guest speaker was Dr. Fred Day, orthopaedic surgeon and recently appointed Director of the newly formed Cerebral Palsy Clinic. Dr. Day's topic was "Bone and Muscular Disorders in Relation to the Dentist".

The winning dental students of the past University term were guests at the meeting.

One of the finest two day **refresher courses** was held at Alberta University on Sept. 18-19. There were 140 dentists from all parts of Alberta and Saskatchewan present.

Much credit for the success of this course must be given to Dr. W. A. Quigley under whose chairmanship it was put on. All the clinicians were Alberta men with the exception of the main speaker who was L. S. Fosdick,

B.S., M.S., Ph.D. of Northwestern University Dental School.

At the luncheon of the Edmonton Dental Society at the Macdonald hotel, held on the second day, the speaker was Professor Andrew Stewart, President of Alberta University. His topic was "Costs of Education and the Implications of these Costs at Alberta University."

During the two days, a get-together was held of all the ex-service dentists who were in attendance. This was held at the Connaught Armouries under the auspices of The Defence Dental Association of Canada (Alberta Branch).

W. E. A.

On September 14, the last of the **summer golf meets** was held at the Mayfair Country Club. There were about fifty members present. Among the visitors were: Dr. Geo. Cameron of Ottawa, Dr. Gordon Cameron of Arcola, Sask., and Dr. Harry Gilchrist.

The outstanding golfer of the day was Dr. M. M. Dunsworth, who at one time

was the best tennis player in these parts. Dr. Dunsworth won the low gross. Low net was won by Dr. Wilkinson, and Dr. Bob Decker, a golfer from away back.

After the tourney a banquet was held in the clubhouse at which Jack Reilly, superintendent of athletics at the Recreation Commission, spoke on "Commercialism of Sport".

After the main talk, a presentation of a brief case was made to Dr. Archie McEwan, who is leaving the city very soon to take a position in the prosthetic department of Emory University at Atlanta, Georgia, U.S.A.

W. E. A.

SASKATCHEWAN

With summer over the **Saskatoon Dental Society** commenced fall activities with Professor J. Millar of the Physiology Department, University of Saskatchewan as guest speaker. Professor Millar was recently selected by the National Research Council for research in physiology of anaesthesia and is about to start this research work in Saskatoon. He referred at some length to the nervous reactions, and to the chemical, electrical reactions accompanying nerve disturbances. He spoke of the impulses and receptors, the hyperaemic pulp, etc. He spoke of the failure to produce anaesthesia and has given some thought as to the method of attacking this problem.

This is his piece of research and we will wait with keen interest for the results. Professor Millar impressed the large gathering with his deep knowledge of the subject and his interesting and educational address was appreciated.

L. D. H.

A program to prevent dental troubles, particularly among children, is being set up in the North Battleford and Assiniboia health regions of Saskatchewan with financial aid from the national health grants.

Hon. Paul Martin, Minister of National Health and Welfare, states that Public Health authorities report that a survey of dental conditions among children of pre-school and public school ages has been made in a similar health region after a year's operation of dental health program. This survey shows that, out of 6,000 children, half of them have never been to a dentist except for emergency treatment, and that 80 per cent require some kind of dental care.

In both the North Battleford and Assiniboia regions private dental practitioners are few and their appointment books in the main are filled for months in advance. Hence, it is difficult to

obtain dental care for younger children, except in emergencies.

Because of the difficulty of getting personnel, the health regions' program will be limited at first. Prevention of dental ailments is to be stressed, with care being given only to the younger age groups and to emergency cases. In each region the full staff will be two dental officers, two dental assistants and two clerks. The federal contribution is estimated at \$23,000 in the current fiscal year.

Equipment to get the program into operation has already been bought with funds provided by the national health grants.

MANITOBA

Manitoba Develops Dental Services For Rural Areas:—A mobile clinic to bring dental services to between 2,500 and 3,000 more children in rural Manitoba is being set up with the aid of a federal health grant.

In rural Manitoba, with a population of more than 400,000 there are only 51 practising dentists or an average of 8,000 persons per dentist, public health officials point out. In many large areas any form of dental service is almost completely lacking. Since 1947 the Bureau of Dental Services of the provincial health department has been conducting dental clinics in rural areas with the part-time aid of dentists in private practice. Last year clinics were held in 37 centres and more than 4,500 children were examined and treated. This service is being continued.

Purchase of a mobile clinic enables preventive dentistry to be extended to many more small schools in outlying parts of the province where no dentists practise, and the use of a self-contained clinic immediately ready for operation will enable the staff to care for large numbers of children without loss of time. The service is without charge to the child.

Prevention of dental troubles is the keynote of this program, and hence it will have a continuing influence for years to come.

The federal grant of more than \$18,800 covers the complete cost of the mobile clinic and the salaries of the dentist and his assistant. Travel expenses and the costs of maintaining the clinic will be met by local communities.

ONTARIO

Study of Tooth Decay at University of Toronto: A statistical study of the incidence of tooth decay among children is being carried out by the faculty of

dentistry of the University of Toronto as part of a national program of research into public health problems, the minister of National Health and Welfare, Hon. Paul Martin has announced.

Until recently, he noted, few attempts have been made to analyze dental data statistically, and most of what has been done was limited to the averaging of mass surveys, with no attempt to qualify the accuracy of the conclusions by estimating the standard errors in sampling. Studies in Canada, the United States and Norway have shown that the amount of dental decay varies according to age and to the tooth surface involved. These investigations have produced at least two methods of estimating the incidence of tooth decay among large numbers of persons.

The present study, which is being carried out by Dr. R. M. Grainger under the supervision of Dr. G. T. Mitton, associate professor of dental public health, will analyze the data available to show the quantity of tooth decay and will attempt to relate this information to the ages and the tooth surfaces of the children involved. Tests will also be made to determine the efficiency of the various methods of estimating tooth decay. Basic information for the study is being obtained from Ontario school surveys and from the Ontario Red Cross meal survey.

Health officials hope that the study will point the way to a more accurate way of estimating the amount of dental work required among children and thus aid public health workers in planning appropriate programs.

Cost of the research is estimated at \$2,700 this year.

Dr. J. A. McDonagh of Montreal has been appointed **Director of Dental Health Services** in Windsor, Ontario.

He served in World War II and upon his return engaged in private practice in Montreal. Later he studied dental public health at the University of Toronto.

The Academy of Dentistry Winter Clinic will be held on Thursday, November 23 at the Royal York Hotel, Toronto. Dr. E. Carl Miller of Cleveland and Dr. Paul C. Salisbury of Northwestern University, Chicago are guest essayists. Mr. Don Henshaw is guest luncheon speaker. Any dentist is invited to attend this clinic.

The Academy of Dentistry year book has just been distributed. The program for the 1950-51 session is very inviting. The Winter Clinic is always a very

worthwhile day for all who attend and Dr. Gordon Frawley feels this year will be better than ever if that is possible. Guest essayists attending the clinic are Dr. E. Carl Miller of Cleveland and Dr. Paul C. Salisbury of Chicago.

During the year there will be three stated meetings; These will be addressed respectively by Dr. S. A. MacGregor of Toronto; Dr. Emmet Beckley of Kansas City, and Dr. Dorothea Radusch of Minneapolis. Stimulating messages can be expected from these well known dental educationists.

Northern Ontario Dental Association has as its president Dr. I. T. Brill of Timmins. His team mates for planning the 1951 Convention at Timmins are Dr. Archie Boyd of Kirkland Lake, Vice-President and Dr. Henry Hudson of Timmins as the hard working secretary.

Dean Ellis, Faculty of Dentistry, University of Toronto, announces **additions to staff:**

Dr. Gordon Nikiforuk as Associate Professor of Paedodontics; he has just returned from two years graduate study at the University of Illinois.

Dr. W. J. Linghorne and Dr. C. H. Moses have accepted appointments as special lecturers.

Drs. M. Currie, J. Methven and G. R. Woollidge have been appointed demonstrators.

The Eastern Ontario Dental Association at its annual convention elected the following as its officers for 1950-51 session:

President—Dr. Paul A. Coté, Ottawa
Vice-President — Dr. E. S. Macartney, Ottawa

Secretary-Treasurer—Dr. Harold Beach, Ottawa

Advisory Board: — Drs. I. F. Calder, Brockville; W. S. Flora, Ottawa; E. E. Johns, Kingston; J. A. Gauthier, Ottawa; F. Kemp, Richmond; T. Provost, Ottawa; Ed. Murphy, Cobden; L. E. MacLachlan, Ottawa; D. S. McPhee, Vankleek Hill; W. H. Pritchard, Ottawa; H. A. Stewart, Kingston; C. E. Woods, Ottawa; and Col. Wansbrough, Ottawa.

Auditors:—Drs. S. W. Bradley, Ottawa; and W. C. Macartney, Ottawa.

At the recent meeting of the **Denco Quarter Century Club**, held in Gananoque, Ontario, on September 9, the members celebrated with President, Mr. James Johnston of Montreal, his 50 years in the dental business.

At the banquet given in his honour, he was presented with a gold pen and pencil set and a purse of money along with a record book, suitably engraved,

bearing the names of all the employees across Canada. This book also contained his photo, three sketches of his dental career as messenger, salesman, and president, a short write-up on his life and service in the company, as well as a photo of 19 of the 22 Quarter Century members. His son, Dr. Wilfred Johnston, Professor of Endodontia from McGill University, was one of two guests at this banquet.

Mr. James Johnston commenced his dental career in the year 1900 as messenger for the S. S. White Dental Manufacturing Company of Philadelphia, which was then located in the Confederation Life Building, Toronto. In 1908 he was made Manager of their only branch house, located in Montreal. In the year 1921, The Dental Company of Canada Ltd. purchased the retail business of the S. S. White Dental Manufacturing Company in Canada and Mr. Johnston then became Vice-President of the newly formed Canadian company, with his headquarters in Montreal. In 1946 he was made President of the company with headquarters still in Montreal, from where he has continued to guide the company affairs.

Mr. Johnston is well known to the dental profession and laboratory technicians all across Canada where he has had the privilege of meeting many of them in their offices and is also well known to the trade both in Canada and the United States. Being of Irish parentage, he recently returned to the old sod to visit his many relatives in the North of Ireland. His son, Jack, was one of the many Canadian boys who made the supreme sacrifice in the last war, his plane having been shot down over France. It was only about a year ago that they located his son's grave, and it is Mr. Johnston's fond ambition that he will be spared to visit his son's grave in the very near future.

It is the sincere wish of not only those whose names are inscribed in the book, but in the dental trade and profession that he be long spared to enjoy many years of health and happiness.

Clarence W. Rahm, Secy.

The executive of the **Dental Nurses' Alumnae Association of Canada** for 1950-51 is as follows: Adrienne Rands, President; Marion Bell, Vice-President; Mary Graham, Recording Secretary; Barbara Loree, Corresponding Secretary; Mary Donald, Assistant Corresponding Secretary; Anna Lindsay, Treasurer; Shirley Anderson, Entertainment; Marion Gardhouse, Welfare; Joan Scott, Membership; Audrey Cowling, Publicity; Gertrude Whitehead, Archivist.

The meetings will be held at the I.O.D.E. Headquarters, Spadina and Lower Avenues, Toronto, on the first Wednesday of each month. A hearty welcome is extended to all graduate dental nurses in the vicinity of Toronto.

Miss A. Cowling

The Board of Governors of the **Ontario Dental Nurses' and Assistants' Association** held their first meeting of the 1950-51 season at Toronto, September 30 and October 1.

The president, Lois Easton of St. Catharines welcomed the representatives from almost every affiliated association. Each convener gave a brief report. It was decided that the President, Lois Easton be the official delegate to the American Dental Assistants' Convention in Atlantic City; also that Rita Larocque be a delegate at the Montreal Convention.

Preliminary plans were made for the Twentieth Annual Convention to be held in Toronto. It was unanimously decided that the registration fee be raised from Six Dollars to Seven Dollars.

The next meeting will be held in Toronto on January 20-21, 1951.

The annual dinner of the **Toronto Academy of Dentistry** was held at the Royal York Hotel on October 16. President Dr. Earl Bancroft presided and with him at the table of honour were Dr. Sidney Smith, President, University of Toronto, Dr. Mackinnon Phillips, Minister of Health for the Province of Ontario, Mr. Leslie Mills, chairman of Canadian Red Cross, Ontario Division, together with a number of representative colleagues from Canadian, Ontario and Toronto Dental and Medical Associations.

Dr. Bancroft after welcoming members and announcing the membership to date as 473, outlined the program prepared for the Academy year. There will be the usual Winter clinic on November 23, and three regular meetings in the New Year. In addition a ladies' night will again be featured; this regular function of former years was discontinued during the War but will be back this year with all its popularity.

As an introduction to the program of the evening, Dr. Gordon Frawley made presentations to representatives of ladies' organizations associated with dentistry in Toronto—Mrs. Leslie Philp, President of the Ladies Auxiliary; Miss Adrienne Rand, President of the Dental Nurses Alumnae and Miss Laura Edwards, President of the Dental Nurses and Assistants Association. Dr. J. H. Johnson, a past president of the academy and presently a member of the Board of Governors of

the Ontario Dental Association presented Dr. E. A. White with the academy past president's jewel. He referred to him as a quiet, tireless and most efficient executive who gets things done on time.

The guest speaker of the evening was Mr. Dolan, director of the Canadian Travel Bureau. He proved to be a fluent and entertaining speaker and at the same time a great salesman for Canada.

He chided his Canadian audience good naturedly about their complacency about our country, "Why our American friends," said he "think Canada is wonderful. Only last year nearly 28 million people came across the border to see Canada and they left 260 million American dollars behind them." Again while Canada has a population of only 14 million people, just one per cent of the world's population yet it is the third trading nation in the world, exceeded only by United States and Great Britain. Oh yes, and the speaker suggested many other things about Canada—her cultural opportunities, the friendliness of her people, her institutions, her way of life—all of which made you feel that perhaps we Canadians do take our heritage and our country too much for granted. In a humorous sally Mr. Dolan referred to a visit he made one time to Texas, the Lone Star State of the Union, where every Texan is a supersalesman for his native State. "I was fulfilling a speaking engagement on Canada," said he, "and I was telling those Texans what a wonderful country Canada was. When I concluded my address many of them came to me and said 'Canada must be a wonderful country, Mr. Dolan, I must go up some time' and one fellow added 'You know you talk so well you ought to be a Texan.'"

The speaker spoke of travel in Canada as an instrument of education where Canadians can learn of her greatness by experience. It is a unifying power because the traveller finds Canada's citizens just good people anywhere you go. You cannot travel across this grand country of ours without returning home a better citizen yourself.

In concluding, Mr. Dolan said "Do not believe that far away fields are greener, because Canada is the greatest country in the world. Be prepared to glory in the citizenship that is yours; be prepared to glory in saying something nice about Canada and be prepared to support our institutions which have made possible our Canadian way of freedom, liberty and justice".

T. R. M.

QUEBEC

The Montreal Dental Club.—From the chairman of the Entertainment Commit-

tee of the annual Fall Clinic comes the following announcement: "The success of the Silver Anniversary Ball of last year's Annual Fall Clinic has prompted the executive to consider that a Dinner Dance should be a yearly event on the Fall Clinic Program. With this in mind, arrangements have been made to hold a Dinner Dance on Thursday, Oct. 19, 1950 in the Champlain Room of the Mount Royal Hotel at 7.30 p.m. Dress will be optional and there will be no speeches." Announcement is also made that the Thursday luncheon speaker will be Dr. Douglas Wilson, Ph.D., formerly of the staff at Western University, and at present a member of the editorial staff of The Montreal Daily Star.

The Mount Royal Dental Society held its opening meeting of the 1950-51 term at the Mount Royal Hotel on Sept. 19, 1950. The guest speaker of the evening was Dr. Johnston W. Abraham, M.M.

Dr. Abraham was introduced by Dr. I. Druckman who recalled Dr. Abraham's previously well-received appearances before the Society. Dr. Abraham then proceeded to deliver an excellent and timely paper on "The Dentist and his Practice." This paper had been delivered on an earlier occasion before the Montreal Endodontia Society and its context reported in the June 1950 issue of the J.C.D.A. However, the central themes of the paper emphasized the need of efficiency in the dental office from the points of view of both a professional and a businessman, and the need for planned sufficient time for leisure, family, and outside interests, are worthy of repetition.

Dr. Abraham was ably thanked by Dr. R. M. Wiener.

The Montreal Endodontia Society held its regular monthly meeting on September 18 in the dental lecture room, McGill university. The speaker of the evening was Dr. Gertrude Kalz, Associate Professor of Bacteriology at McGill University who spoke on "The Newer Developments in Antibiotics." A summary of this talk will be reported in the next issue of The Journal.

NEW BRUNSWICK

The annual convention of the New Brunswick Dental Society was held in Fredericton, September 30 and October 1. A report was given on the provincial dental health survey and also on a trip of six New Brunswick dentists to New York for advanced study of oral cancer. These dentists were sent by the New

Brunswick branch of the Canadian Cancer Society.

Dr. E. M. Wilson of Fredericton was presented with a silver tray in honour of his having been practising dentistry for 50 years.

The following officers were elected: President, Dr. S. K. Cogle, Saint John; Vice-President, Dr. Thomas H. Lewis, Woodstock; Sec.-Registrar, Dr. S. K. Wetmore, Saint John. Dr. A. J. Coughlan was appointed governor to the Canadian Dental Association and Dr. H. H. Peters a delegate to the Dental Council of Canada.

The next convention will be held in Charlottetown, Prince Edward Island, next June.

Doctor George Frederick Clarke, Woodstock, New Brunswick, has recently had his sixth book published. "David Cameron's Adventures" bears the imprint of the well-known English publisher, Blackie and Son, London, Glasgow, Bombay and Toronto. It is a historical narrative set in those turbulent years 1744-1761, when France and England were struggling for mastery in the New World, as well as upon the continent of Europe. Perhaps it is not generally known that between the years 1740-1750, some five thousand children were taken from work-houses (some even kidnapped from good homes in the British Isles) and sold into slavery in the colonies for a term of seven years. David Cameron was one of these. He was sold to an unprincipled planter in Virginia, finally escaped, lived among the Indians, and during his peregrinations travelled over half a continent, to finally reach his old home in Aberdeen four years later.

Besides "David Cameron's Adventures", Doctor Clarke's published books include, "The Magic Road", "Chris in Canada", "The Best One Thing", "Thetis Saxon", and a chap book "Poems of the Saint John River". He has also had numerous short stories published in this country, the United States, and Great Britain. Several animal stories were published by the well-known firm of William Collins. Now nearing completion is a book entitled "Archaeology of Central New Brunswick" which Doctor Clarke terms his most ambitious undertaking.

The first draft of "David Cameron's Adventures" was made shortly after the outbreak of the last Great War, but due to the fact that, through part of the war years Doctor Clarke was the only dentist practising in Woodstock, the work was not again taken up until three years ago; it was rewritten while the author was ill with pleural pneumonia. It took thirty days to complete and revise the script, typed by his wife as fast as each page was written in pencil.

NOVA SCOTIA

The Maritime Dental Association met at the Digby Pines Hotel, Digby, N.S., August 30-September 2. Approximately 95 dentists and their wives attended from Nova Scotia, the host province, New Brunswick, Prince Edward Island and Newfoundland. Also in attendance were guests from Quebec, Ontario and the United States. The attendance was highly gratifying to the committee in view of the railway strike which was effective at the time. This was the second successive year in which the dentists from the Maritime Provinces met as one body for clinical sessions. A third meeting is scheduled for Charlottetown in 1951, with the Prince Edward Island Dental Association as the host. It would appear that the Maritimes Dental Association is now an established body and we all look forward to many successful years as a combined effort.

The social activities of the meeting were under the capable management of Dr. P. S. Christie and Mrs. G. M. Dewis.

The scientific section of the program consisted of the following:

Essayist—Dr. J. S. Bagnall, Halifax, "Recent Development in Dental Caries Research."

Clinicians: Dr. M. M. DeVan, Philadelphia, "Diagnostic Phase of Full Denture Construction."

Dr. Walter C. McBride, Detroit, "Children in the Family Practice."

Dr. Donald S. Moore, Hamilton, Ont., "Periodontal Diseases of Interest to the General Practitioner."

Dr. O. L. Croft, Halifax, "Oral Surgery for the General Practitioner."

Dr. W. W. Woodbury, Halifax, "Orthodontics in General Practice."

Dr. H. M. Eaton, Halifax, "Dental Radiology."

Table Clinics by: Drs. L. F. Allanach, Moncton, N.B.; R. H. Bingham, Moncton, N.B.; J. E. Comeau, Weymouth, N.S.; Vincent Grant, Summerside, P.E.I.; L. G. Israel, Sydney, N.S.; G. M. Logan, Halifax, N.S.; F. L. Miller, Fredericton, N.B.; A. G. Nutlay, Halifax, N.S.; and V. G. Turnbull, Digby, N.S.

At the Annual Meeting of the Nova Scotia Dental Association, which took place during the Convention, the following officers were elected:

President, Dr. J. P. McGuigan; Senior Vice-Pres., Dr. J. A. Tupper; Junior Vice-Pres., Dr. Hardy Parker; Secretary, Dr. A. B. Haverstock; Executive Member, Dr. J. S. Christie.

Canadian Dental Association Governor, Dr. G. M. Dewis; Alternate, Dr. J. P. McGuigan.

Dental Council of Canada Representative, Dr. H. S. Crosby; Alternate, Dr. L. G. Israel.

PRINCE EDWARD ISLAND

Dr. Brian J. O'Meara has been appointed head of the **Division of Public Hygiene**, Department of Health and Welfare. He was educated at the University of Birmingham. In 1947 he came to Canada and studied at University of Toronto where he obtained his degree in dental public health before moving to Prince Edward Island.—Charlotte-town Patriot.

BRITISH COLUMBIA

The **Victoria Dental Society**, at its first fall meeting, heard an excellent address given by Doctor Eric Worden, of Vancouver, on "Periodontia for the General Practitioner". The presentation was exceptionally well received, since Doctor Worden brought the subject well within the range of the average dentist, and spoke simply and effectively.

Doctor McCombie, head of the Department of Preventive Dentistry of the Provincial Government, attended the meeting. He was welcomed back after attending the course on Dental Public Health at the University of Toronto during the past year.

The annual dance of the Victoria Society was held on October 21.

Doctor Frank Wood, of Seattle, was selected to address the second meeting of the year on the subject of "Immediate Dentures".

The **Executive Committee of the British Columbia Dental Association** met for its first meeting to select committees and outline the work for the coming year.

The **Dental Public Health Committee** will carry on with the program instituted last year in developing dental public health services throughout the Province. Several areas in the outlying districts of the Province have adopted the plan outlined by this committee in co-operation with the Department of Preventive Dentistry of the Provincial Government, and although minor difficulties have been encountered, the plan would seem to be meeting with general success in its operation.

For the first fall meeting, the **Vancouver and District Dental Society** will hear an address on the subject of Psychosomatic Medicine and its relation to Dentistry. The program committee have also secured a film on the Air Abrasive Technique, which will be a most attractive feature to the members.

Preliminary reports are being received on the program for the meeting of the Pacific Coast Dental Conference to be held in the Civic Auditorium in Seattle, Wash., June 25-28, 1951.

Membership states and provinces in this organization are Alberta, Arizona, British Columbia, California, Idaho, Montana, Nevada, Oregon, Utah and Washington.

BRITISH COMMONWEALTH NEWS

GREAT BRITAIN

Remuneration in the National Health Services. — The following paragraphs from the Report of the Committee of Public Accounts, recently presented to the House of Commons, will be of interest to members of the dental profession:

The schemes of remuneration of doctors and dentists were designed broadly to give effect to the recommendations of committees set up under the chairmanship of Sir Will Spens. These committees recommended increases over the pre-war ranges of remuneration which they expressed in terms of 1939 money values, leaving the Departments to settle the appropriate addition to reflect current conditions. This addition was settled after discussions with the professions at 20 per cent. The pre-war earnings of dentists had been on the whole appreciably less than those of doctors, and the Spens Committee recommended ranges that would preserve this relativity when there were enough dentists to meet the demand

for their services, with a rather higher range in the meantime.

As a result of their examination of these arrangements it appears to your Committee that in working out the basis of payment a number of assumptions or estimates were made relating to factors not then susceptible of verification from experience. For instance, it was assumed that there would be an increase in doctors' expenses of 55 per cent over the 1939 figures; dentists' expenses were taken, without any independent evidence, as 52 per cent of gross earnings; it was estimated that dentists could not work more than 1,500 chairside hours a year, involving about 1,900 hours total work, without detriment to their efficiency... The Departments have not yet checked all these estimates against actual experience but some of them have been clearly falsified by experience.

The Ministry of Health stated that dentists have been able to work unbelievably long hours, and, although there is some evidence of scamped work and

even of fraud, they now think that it is perfectly possible for dentists to work considerably more than 1,500 chairside hours a year without detriment to their efficiency. In consequence dentists' earnings have been generally in excess of the Spens ranges; they have been considerably higher than those of doctors and the Ministry think it would be a serious state of affairs if this continued. Cuts have been imposed on the payments to dentists, whose initial fees were subject to review within twelve months, and the Ministry are now obtaining information as to earnings and expenses with a view to further discussion of remuneration with the dentists.—Br. D. Jour. Sept. 5, 1950.

Dentistry under the National Health Act of Great Britain.—Rodney G. Swiss, L.D.S.R.C.S. in the *Journal of the Missouri State Dental Association* summarizes the reactions of the dentists in the light of experience in this Service as follows. He would express approval of:

(a) the bridging of a gap that was apparent before the Service was introduced, the gap created by the teenagers who had treatment up to school leaving age but had not qualified for dental benefit under the old scheme until they had been in employment for some years. Before 1948 they were not in employment carrying sufficient remuneration to obtain dental treatment.

(b) the Service allows the dentist to deal with all normal treatment he considers necessary without having to consider the ability of his patient to meet the cost.

(c) there are no bad debts.

(d) the Service provides for a pension, and he would criticize—

(1) the failure to ensure that the child population receives full and adequate treatment, surely the foundation of dental health of the nation.

(2) the abnormal pressure of work due to the fact that every member of the population can request dental treatment from an understaffed profession.

(3) the introduction of a service which appears to be free by not having to make any direct payment inclines many people to place a lower value on what they receive.

(4) the growing knowledge that conditions are tending to lower the high technical standards with the consequent sense of frustration so introduced.

(5) the feeling of insecurity within the profession when it is known that conditions of service regulations and remuneration can be altered by the Minister without consultation with the profession.

(6) the restrictions of the regulations which as they are more rigorously applied become more irksome.

NEW ZEALAND

New Zealand dental nurse plan.—No short cut to dental health says the editor of the *Journal of the American Dental Association* in the September issue. He outlines the plan as follows:—

The New Zealand dental nurse plan, which has been in operation for almost 30 years, has long furnished a favourite discussion topic for dentists and other health workers in this country. Published reports of the plan have been varied and conflicting ranging from highest praise to strongest condemnation. These conflicting reports, plus the fact that a few dentists and others concerned over the dental ill health of American children have strongly advocated the adoption of the New Zealand plan here, prompted the Board of Trustees of the Association to send Allen O. Gruebbel, secretary of the Council on Dental Health, to New Zealand to study the program and report his findings.

During his two months' stay in that country last spring, Dr. Gruebbel visited the Department of Health, the Board of Education, the University of Otago Dental School, the Dental Association and the Dominion Training School for Dental Nurses. He observed the training of the dental nurses, watched them work in the field, examined the mouths of their child patients and interviewed dentists, nurses, government officials and men in the street. He studied government documents, analyzed annual reports and compared dental health records of 30 years ago with those that exist today. From these findings he fashioned his report.

Dr. Gruebbel's findings constitute the most comprehensive report on the New Zealand dental nurse plan ever published in this country. Written in the calm, cold phrases of a careful investigator, it tells between its lines a poignant story: a story of a good people who recognized a great need of their children and sought to meet that need, a story of a small group of well-meaning dentists willing to relegate an important branch of dental service to partially trained auxiliaries on behalf of the health of children—a story of a new country that set forth on a new road which it hoped would be a short cut to optimum dental health, only to find after 30 years that the road went nowhere and that those who trod it might well have travelled a treadmill.

Outstanding among the many deficiencies of the dental nurse program is the

fact that, although the plan has been in operation for over a quarter of a century, the incidence of dental caries among New Zealand children is as high as, or higher than the incidence of caries in any other country for which data have been reported, and at least twice as high as in most areas of the United States.

The New Zealand dental nurse program has proved that there is no short cut to dental health and that two-level dentistry will not solve the dental problem. It has demonstrated that dental health

standards cannot be raised by reparative service alone. It has re-established the fact that the profession must rely on continuing research for better means that will prevent dental disease and also for new methods that will extend high quality service to greater numbers of people. Lastly, the unsuccessful 30 year experiment which New Zealand has conducted will serve as a grave warning to those who advocate the adoption of a similar plan in this country.

GENERAL NEWS

The C.D.A. War Memorial Scholarship Committee has announced that theses can be forwarded to the committee up to March 30, 1951. It has also been decided to extend the maximum number of words in each essay up to 4,000.

Clinical Trials of Antihistaminic Drugs in the Prevention and Treatment of the Common Cold.—In view of the great practical importance of the favourable findings, if confirmed, the Medical Research Council of Great Britain undertook, at the request of the Ministry of Health, to investigate in this country the value of the treatment. A special committee was appointed early in 1950, and the results of the tests arranged by the committee are reported here.

These therapeutic trials were set up at 19 widely distributed centres with a total population of approximately 58,000. They were carried out in each area between the middle of March and the middle of May, 1950, though not invariably over the whole of that period.

In a small but carefully controlled experiment two anti-histaminic drugs—promethazine hydrochloride and chlorcyclizine hydrochloride—showed no evidence of having any value in the prevention of experimentally induced colds.

A large-scale clinical trial of thonzylamine in widely separated areas in Great Britain and Northern Ireland, carried out between the middle of March and the middle of May, 1950, showed that, in the dosage employed, this antihistaminic drug had little if any value in the treatment of the common cold.—Br. Med. Jour. August 19, 1950.

Trial of Antistin in the Common Cold.—Gerard Lorrimer, M.B.E., M.D., M.R.C.P., Medical Adviser to Ciba Laboratories, Ltd, Horsham, and W. J. Martin, D.Sc., Ph.D. report in the British Medical Journal of August 19, 1950 that fol-

lowing American reports of the suppression of symptoms of the common cold by the prompt administration of antihistaminics, it was felt necessary to make a large-scale trial in the United Kingdom, adopting such controls as were practicable, in an endeavour to remove doubt concerning the efficacy or otherwise of the suggested treatment. "Antistin" was selected as suitable for such a trial.

Therapeutic trials were carried out in nine centres, and the records of 1,744 patients were received from these centres. The numbers were 866 in the treated group and 877 in the control group. This large-scale trial of antistin failed to show that this drug had any effect on the course of the common cold.

Antihistaminic Drugs and the Common Cold.—The Editor of the British Medical Journal says the following in part in the August 19 issue. "The common cold has again come unscathed through an ineffective therapeutic attack. The hopes that were initially raised by reports of the value of antihistaminic drugs in the prevention and treatment of colds have received no further support. On the contrary, two reports in this issue of the Journal provide convincing evidence that these drugs have little or no effect on the course of a cold. It is not the first time that claims for new cures have proved to be groundless, but in this instance emotions have been aroused unnecessarily and tragedies have occurred which should have been avoided.

In this country we have been fortunate that there has been a spirit of co-operation which has prevented over-enthusiasm on the part of the manufacturers—and here it should be emphasized that there are no doubts whatsoever about the value of the antihistaminic drugs in their right place. There have,

however, been individual tragedies. The pressure of public opinion, which is sensitive to news from afar, resulted in the open sale of antihistaminic drugs and their storage in many domestic cupboards. In some instances children have found the tablets, sampled them, and died. Such events are always tragic, but are the more so when the drug would not have been of any use for the condition for which it was bought.

In the August 16 issue of the *Proceedings of the Mayo Clinic* the findings are given of a symposium on **Cortisone and ACTH** in clinical medicine.

Some have said that these substances will not cure anything and it is pointed out that this may be correct. It has also been said that despite intensive efforts of many investigators there is no real idea as to how these substances work and it is pointed out that this is certainly correct to date.

It is stated that cortisone appears to have little or no effect on the irritant causing the disease, but seems to provide the susceptible tissues with a shield-like buffer against the irritant. In other words, it suppresses the fire; it does not of itself put out the fire (remove the irritant) nor does it serve as a carpenter to repair the fire's damage.

It is shown that cortisone and ACTH can already be credited with an impressive number of "firsts", that they are the first natural agents by which has been demonstrated the potential reversibility of several diseases, including especially rheumatoid arthritis. They are the first agents which have shown real promise of affecting certain features of acute rheumatic fever and acute rheumatic carditis which have not heretofore been influenced by salicylates. They are the first natural or hormonal agents found capable of giving consistently symptomatic relief and a temporary reprieve in the face of an intercurrent severe acute crisis of disseminated lupus erythematosus. Aside from epinephrine they are the first hormonal agents with marked antiallergic properties. They are the first ones which apparently have the power of suppressing certain ocular lesions that have heretofore been quite difficult to control and have been productive of much blindness. For the first time potent adrenal cortical hormones are available to provide the psychiatric investigator with a means for the long-term study of the psychologic changes which accompany extensive physiologic change. It is the converse of the usual psychologic experiment for now the stress may be produced by a variation in the metabolic substrate.

Much remains to be learned about ACTH and cortisone, about their mode of action, the optimal method for their administration and the prevention or control of undesirable side effects. As a result of intensive studies thereon, side effects are now assuming their proper position as features for which physicians must show respect but not fear. Until more data are at hand cortisone and ACTH are being used at the Clinic, not as established forms of treatment, but as useful new tools for the clinical investigation of a group of diseases which has heretofore been peculiarly resistant to inquiry.

The following effects of cortisone and ACTH on patients with rheumatoid arthritis were given:

Eight patients maintained 60 to 90 per cent of the improvement for seven to fourteen months. Five patients maintained about 50 per cent of the improvement. The other 10 patients maintained little or none of the improvement.

From observations it was considered that cortisone and ACTH are capable of suppressing, but not curing, acute rheumatic fever and it is very doubtful that they shorten the natural duration of the acute rheumatic state. As corollary of this concept it is considered that the administration of these hormones to patients with acute rheumatic fever should be planned to maintain suppression of the acute manifestations of the disease until its inherent duration is at an end.

Cortisone and ACTH were not observed to prevent recurrence of acute rheumatic fever or to modify pre-existing chronic valvular damage and the associated cardiac hypertrophy.

Each patient treated experienced prompt relief from the symptoms of bronchial asthma and hay fever occurring as the result of pollen sensitivity. This relief was greater than that previously achieved with hyposensitization to ragweed pollen extract or with the use of antihistamine drugs. The symptoms of bronchial asthma were relieved more quickly than were symptoms of hay fever. Within three days following the onset of administration of cortisone only occasional allergic symptoms, which were of a mild and transitory nature, were observed. The relief of symptoms was apparently confined to the period during and immediately following the time when cortisone was being administered. No untoward symptoms occurred as the result of cortisone administration.

Reports were also given of the effects on Lupus Erythematosus, Chronic Ulcerative Colitis, Leukemia, Ophthalmic Diseases, Nephritis with Edema, Cranial

Arteritis, Psychiatric Aspects, Endocrine Conditions, Neurologic Diseases.

The symposium was summarized in part by stating that it is apparent that the beneficial effects of these agents on certain non-hormonal diseases constitutes an important medical advance. Second, that it is now apparent that the diseases which are favourably modified by cortisone and ACTH are not cured by them. Third, as has been stated repeatedly, cortisone and ACTH are powerful hormonal agents which are capable of inducing a wide variety of physiologic or pharmacologic alterations. Some of these alterations have favourable therapeutic implications, others are relatively unimportant, while still others may impose hazard upon the patient.

At the present time the conclusion seems inescapable that the therapeutic application of these hormones has not yet been sufficiently extensive to permit an appraisal of their place in practical therapeutics, particularly in diseases which follow a chronic course. However, it should be noted that encouraging reports of prolonged administration of small maintenance doses to patients with rheumatoid arthritis are beginning to appear.

The "impregnation" method of preventing tooth decay holds little value, three public health officials report in *The Journal of the American Dental Association*. In the first controlled test of the theory, results were found to be almost completely negative.

The theory of impregnation, advanced by the late Dr. Bernhard Gottlieb, attracted wide attention during recent years as a new method for checking decay, mankind's most common disease.

Using the technique developed by Dr. Gottlieb, a year-long research study was conducted by Dr. David B. Ast, director of the New York State Bureau of Dental Health, assisted by Dr. Arthur Bushel, associate director, and Helen C. Chase, biostatistician.

The technique consisted of treating the teeth with several chemicals to wall off the tiny fissures in the enamel which Dr. Gottlieb contended were the invasion roads for decay-producing bacteria.

Dr. Ast and his associates based their report on a study of 179 boys and girls between the ages of 12 and 15 in two junior high schools in Albany and Schenectady, N.Y.

During the test period, the upper and lower teeth on one side of the children's mouths were treated according to details set forth by Dr. Gottlieb. These teeth

were painted with a solution of zinc chloride and potassium ferrocyanide.

The teeth on the other side of the children's mouths served as a control and were left untreated. To ensure that the technique advocated by Dr. Gottlieb was used correctly, one of his colleagues acted as a consultant in the study.

Although Dr. Gottlieb had claimed that his technique would reduce tooth decay up to 90 per cent, results of the study indicated little appreciable differences between teeth treated by the impregnation method and those untreated.

At the end of the year, x-ray examinations revealed that 22.4 per cent of the teeth in the portion of the children's mouths that were untreated had developed new cavities as compared with 20.7 per cent of the teeth in the half of the mouth that were treated according to the Gottlieb method.

Pointing to the results, the scientists said:

"No appreciable caries prophylactic (prevention of decay) is derived from the impregnation of tooth enamel."

The Second Series of Telephone Postgraduate Courses, conducted by the Illinois University College of Dentistry, will begin on November 13, 1950. The courses will be made up of 5 two-year, round table discussions and symposia on the following subjects:

- Modern Concepts of Drug Therapy in Dental Practice
- Periodontia
- Clinical and Physical Appraisal of Dental Materials
- Preventive Dentistry
- Oral Medicine

Each of these subjects will be presented by specially selected, well-known authorities from all parts of the nation.

The first series of these courses was wired to more than 7,000 dentists in 163 communities in 43 states.

Dr. M. Don Clawson is giving up the presidency of Meharry Medical College, Nashville, Tennessee, U.S.A., at the end of a year of sabbatical leave which began on July 1st, 1950. Dr. Clawson plans to make a trip to Europe and the Near East and re-enter the purely dental field before the autumn.

The Meharry Medical College is a well-known American institution for the education of negro physicians and dentists. Dr. Clawson has been connected with Meharry since May, 1942, going

there as Director of Dental Education and becoming President in 1945.

Prior to that time he had spent a number of years in the Near and Middle East. He served as Professor of Operative Dentistry at the American University, Beirut, Syria, from 1930 until 1934. He was Chief of the Dental Mission to Africa and the Near East for the United States Government in 1942. During the Second World War he was a consultant to war-time agencies in Washington.

In 1947 he was named President of the International College of Dentists (at large). He is a member of the American Dental Society of Europe, and an honorary member of the Academy of Odontology of Argentina and of the Dental Societies of Palestine, Iraq, Syria, Lebanon, Turkey, Persia and Egypt. He is also a member of the American Medical Association, and the only dentist ever to serve as head of an American medical college. — D.Mag. and Oral Topics.

New Prescription Regulations in New York State.—These regulations require the prescription for every prosthetic denture or bridge, orthodontic or other appliance for the correction of malocclusion, shall contain: (1) the name of the laboratory to which the prescription is addressed; (2) the date on which it is written; (3) a clear description of the work to be done, with appropriate diagrams if necessary; (4) a clear specification of the character of materials to be used; and (5) the signature and license number of the licensed and registered dentist.

At the ninetieth annual session of the A.D.A. the House of Delegates approved the following objectives of a **Dental Health Program**.

1. Help every American appreciate the importance of a healthy mouth.

2. Help every American appreciate the relationship of dental health to general health and appearance.

3. Encourage the observance of dental health practices, including personal care, professional care, proper diet and oral habits.

4. Enlist the aid of all groups and agencies interested in the promotion of health.

5. Correlate dental health activities with generalized health programs.

6. Stimulate the development of resources for making dental care available to all children and youth.

7. Stimulate all dentists to perform adequate dental health services for children.

Americans spent **\$931,000,000 for dental care** in 1949, according to estimates made by the U.S. Department of Commerce. This is an all-time high and nearly 4 per cent above the total in the previous peak year, 1948. The figure did not include dental expenditures by government or by philanthropic organizations.

Chicago Interested in Fluorination.—Dr. Herman N. Bundesen, President of the Chicago Board of Health, has asked the Chicago Dental Society for its opinion as to the efficacy of adding fluoride to Chicago's drinking water as a measure to curb dental caries.

The stand of the Society was expressed through its Executive Secretary, Karl S. Richardson, as follows: "Fluorination of water is a long time research project with frequent and regular examinations and tests. At present, there is insufficient evidence to draw definite conclusions but there are indications of a reduction in caries incidence."

IN MEMORIAM

Frank G. J. Bezeau of Vancouver, B.C. died September 17. He was graduated from Northwestern University in 1916 and moved to Vancouver in 1917. On his return from overseas in World War I he joined the school dental service and was still serving there at the time of his death.

He was a member of Zion Lodge A.F. & A.M., Scottish Rite, the Shrine and Vancouver Dental Society.

Dr. Bezeau had asked that no flowers be sent to his funeral. Instead he wanted donations to VGH heart clinic.

He is survived by his widow, two sisters and two brothers.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

NOVEMBRE, 1950

NO 11

Traitements des kystes radiculaires*

par PIERRE P. BLANC, Port-au-Prince, Haiti

Introduction. Un examen clinique insuffisant, conduisant presque fatalement à un diagnostic erroné, d'où, l'application de traitements inadéquats, peut avoir des conséquences parfois désastreuses et toujours nuisibles d'abord au patient déconcerté, qui perd confiance, ensuite à l'opérateur, dont la réputation s'en ressentira. Ceci est vrai pour tous les cas sur lesquels le clinicien est appelé à se prononcer chaque jour, surtout ceux qui, comme les kystes radiculaires, en raison de leur localisation dans les maxillaires, leur caractère chronique, et les relations qu'ils peuvent occuper avec des organes voisins importants, méritent une attention spéciale. Dans l'étude qui va suivre et qui a trait aux différents traitements utilisés dans les cas de kystes radiculaires, nous allons nous efforcer de présenter au lecteur une revue de ces différents traitements qui ont été préconisés et employés jusqu'ici et, si possible, les adapter à chaque cas pris individuellement.

Pour certains, ces traitements sont toujours chirurgicaux et doivent constituer dans l'énucléation complète du sac kystique et le curetage minutieux des parois. D'autres, moins radicaux, pensent que le traitement des kystes radiculaires doit s'inspirer de la région atteinte et de l'état de l'os de la région (1). Pour cette catégorie d'auteurs, il peut exister des cas où un traitement radical

ne saurait être entrepris sans danger, surtout dans ceux du maxillaire supérieur où leur voisinage avec le sinus maxillaire rendrait un curetage dangereux pour la membrane de Schneider et dans le maxillaire inférieur pour le nerf dentaire alvéolaire. Dans ces cas, il serait recommandé d'employer le procédé de marsupialisation suivi ou non de cautérisation, connu sous le nom de procédé de Partsh (2).

Enfin, d'autres auteurs vont jusqu'à protester contre les procédés chirurgicaux, particulièrement le curetage, lequel n'étant pas toujours "*sans inconvénients et même sans dangers, peut et doit être évité*" (3). Pour eux, tous les cas de kystes radiculaires, qu'ils soient suppurés ou non, peuvent être traités avec satisfaction par simple tamponnement à l'aide d'une mèche imbibée d'acide trichloracétique.

D'après ce bref exposé, nous constatons que le traitement de kystes radiculaires comporte trois méthodes: 1° la méthode d'énucléation complète; 2° la méthode de Partsh; 3° la méthode chimiothérapique.

Avant d'entrer dans les détails de ces différentes méthodes, il conviendrait, pour rester fidèle au plan que nous avons tracé tout au début de ce travail, de donner un bref aperçu sur les kystes radiculaires, leur étiologie, leurs symptômes et leur anatomie pathologique.

*Thèse présentée à la fin d'un stage d'une année au département de chirurgie à la faculté de Chirurgie Dentaire de l'Université de Montréal.

Définition: D'après M. M. Dechaume et M. Winter, il est généralement accepté qu'un kyste radiculaire est une cavité dans la substance osseuse pourvue d'une paroi définie, ou capsule, constituée par un épithélium squameux. Il peut se trouver indifféremment au maxillaire et à la mandibule. Il est généralement appendu à l'apex d'une dent mortifiée. Son contenu est un liquide jaune citrin clair ou filant et visqueux, contenant de la cholestérine.

Etiologie: La présence de l'épithélium constituant la membrane du kyste a donné lieu à de nombreuses controverses, d'où diverses théories, parfois directement opposées les unes aux autres tendant toutes à expliquer son origine. Des autorités comme Black, Fisher, Malassez, Croquefer, etc. . . , et encore pour ne citer que les plus célèbres, se sont tour à tour prononcés sur la question qu'ils ont élargie et clarifiée, mais c'est à Malassez que nous devons celle qui semble être la plus propre et la plus digne d'être retenue.

La voici d'ailleurs telle qu'exposée par M. Michel Dechaume, dans son intéressant précis de stomatologie, au chapitre intitulé: "Tumeurs des débris épithéliaux aberrants de Malassez et du tissu conjonctif du ligament."

"L'origine du revêtement épithélial des kystes radiculo-dentaires, provient d'une prolifération des débris épithéliaux para-dentaires. L'infection, venue du canal dentaire agit à la fois sur le tissu conjonctif et sur les débris épithéliaux para-dentaires apicaux. La prolifération du tissu conjonctif donne lieu à un granulome enkysté, avec ou sans masses épithéliales, suivant qu'il y a ou non prolifération des débris épithéliaux. Ces débris hypertrophiés, se différencient, tendant à se disposer en revêtement et à prendre le type adamantin; il se formerait ainsi des petits kystes, soit à l'extrémité de la racine, soit à quelque distance suivant la localisation des débris para-dentaires, point de départ de ces tumeurs."

Comment se présentent les kystes radiculaires? Quels sont les signes ou symptômes qui, en clinique, vont nous

permettre de le déceler et de le diagnostiquer?

Mead, dans la 5e édition de son ouvrage, "Oral Surgery," nous dit ceci:

"Les kystes radiculaires, d'une nature invariablement chronique, progressive, évoluent généralement sans douleur, mais à leur période aiguë, ils sont très douloureux. Cette douleur peut être pour le patient la première révélation de leur existence. Souvent la palpation peut révéler, dans la zone de résorption osseuse, leur extrême extension. Extérieurement, ils peuvent ne pas avoir de manifestations, mais on peut également apercevoir une légère enflure sur la surface alvéolaire, un petit renflement qui est d'une nature fluctuante, émettant une crépitation parcheminée à la palpation. Les glandes lymphatiques ne sont pas atteintes."

"Une radiographie montrera le degré de résorption osseuse. Une cavité kystique avec bords bien définis. La radiographie peut ne pas montrer toute l'étendue du kyste dans certains cas où le kyste occupe, par exemple, la région du sinus. Dans ce cas, on recourt à la transillumination."

"En l'absence de signes objectifs, un examen histologique révélera la présence des débris épithéliaux de Malassez et de cristaux de cholestérine. Parfois, pourtant, dans les très vieux kystes, le revêtement épithélial peut faire défaut."

Anatomie pathologique

Dans la 4ème édition de son Atlas of Dental and Oral Pathology, Bernier prétend que les caractéristiques histologiques de ces lésions ne sont pas spécifiques. On trouve en effet "comme dans les simples granulomes, une masse environnée d'une capsule collagène fibreuse dense, qui est souvent modérément vascularisée et qui se confond avec le stroma environnant." L'activité prolifératrice de l'épithélium peut être telle qu'elle peut conduire à un diagnostic erroné de tumeur maligne. Cette hypertrophie est le résultat d'une inflammation chronique de la paroi kysti-

que qui est intimement liée avec l'épithélium de revêtement. Un fait constant est la rencontre d'un grand nombre de cellules du plasma accolées aux lymphocytes. Avec l'âge, le tissu fibreux devient plus dense tandis que la vascularisation diminue (4).

Rapport du kyste avec les racines dentaires (5):

"Le kyste est en général appendu à l'apex d'une dent mortifiée. Plus rarement il est latéro-radulaire lorsqu'il a pour point de départ, l'orifice d'un canal aberrant de Sarran ou une perforation instrumentale. Il refoule exceptionnellement les racines des dents voisines. Il les contourne habituellement, les dénude sans les léser, si bien qu'elles peuvent faire saillie dans la cavité kystique, en conservant leur vitalité; rarement elles présentent de la rhizalyse.

EVOLUTION DU KISTE — *Habituellement du côté du point de moindre résistance. Au maxillaire supérieur, il refoule la paroi sinusienne. La paroi, qui l'en sépare, peut disparaître, mais l'adhérence n'est jamais complète entre les deux membranes; le décollement est donc toujours possible. Parfois, le kyste finit par occuper la place du sinus. La muqueuse sinusienne peut réagir et devenir polypeuse. Au maxillaire inférieur, le kyste peut refouler le nerf dentaire inférieur".*

Suppuration: Fréquente, elle s'accompagne d'un épaississement de la paroi kystique et d'une transformation purulente du liquide kystique. Devenue chronique, elle détermine une adhérence relative de la poche avec la paroi kystique, ainsi qu'un épaississement de plus en plus marqué de la paroi avec végétation intrakystique. Cette suppuration provoque rarement une sinusite, un abcès périmaxillaire, un abcès sous-périosté palatin et secondairement des nécroses osseuses.

Dégénérescence: La dégénérescence maligne est exceptionnelle, mais possible. Donc, il est indispensable d'enlever toute la paroi kystique dans la cure de ces kystes.

Théories expliquant la formation des kystes: Diverses théories ont été émises pour expliquer la formation des kystes radiculaires. Michel Dechaume, dans un chapitre spécialement réservé de son précis de stomatologie cite la théorie de Delater et Bercher. D'après ces auteurs, ce sont d'abord les débris épithéliaux qui s'hyperplasient, puis irritent le tissu conjonctif (épithélio - granulome). La vacualisation se produirait par un processus infractoïde. De nombreux capillaires pénètrent dans les digitations épithéliales. Beaucoup d'entre eux n'ont pour enveloppe qu'un manchon collagène. Ils se trouvent ainsi en contact direct avec les cellules rameuses épithéliales. Ils se rompent facilement, déterminant alors une hémorragie qui inonde les travées épithéliales, distendant peu à peu les parois, disséquant les axes conjonctivo-vasculaires qui les traversent et forment ainsi une cavité infractueuse dont les parois restent formées par l'épithélium.

Pour Croquefer, la formation kystique s'explique par une dégénérescence cholestérinique.

Partsch est d'avis que la formation du kyste est liée à un processus de dégénérescence du tissu de granulation.

Ardoïn fait intervenir deux facteurs:

- 1o la polarisation épithéliale;
- 2o le degré d'inflammation du tissu ambiant.

Donc ici intervient les deux éléments épithélial et conjonctif. Il part de ce principe que "les greffes expérimentales prouvent que la persistance d'un épithélium de revêtement dans un tissu aboutit presque toujours à la formation d'un kyste. Les débris adamantins sont les vestiges persistants d'organes embryonnaires transitoires, résultant de la formation incomplète des éléments du bourgeon dentaire primitif". Ces débris de sources malpighiennes se comportent absolument comme des greffes de tissus adultes, mais avec ces différences: qu'elles ont moins de tendance à la résorption et qu'il faut qu'un certain degré d'inflammation intervienne pour les transformer en kyste.

Traitements préconisés:

1o *La méthode d'énucléation complète.* Mead, dans la 2ème édition de son "Oral Pathology", nous donne des indications précieuses, relatives à cette méthode:

"L'opérateur fera une ou des incisions à sa discrétion dans le tissu mou qui est ensuite retracté de façon à bien exposer l'os de toute la région infectée. Dans beaucoup de cas, l'os recouvrant le kyste est tellement mince qu'il donne l'apparence d'un parchemin qui crépite sous le doigt palpeur. L'emploi du ciseau et du maillet devient alors inutile, car on peut exposer le kyste à l'aide d'un bistouri et d'une pince hémostatique, ou d'un rongeur."

Souvent aussi, l'os est dense et épais. Dans ce cas, on pratique au-dessous du kyste une petite ouverture au ciseau que l'on agrandit par la suite à l'aide d'un instrument tranchant à os quelconque.

Le kyste ayant été exposé, il convient de procéder à son ablation sans faire de ponction, sauf dans le cas de kyste extrêmement volumineux, où du liquide est contenu dans la paroi kystique. On incise alors afin d'aspirer le contenu du kyste. Après la dissection complète du kyste, on aura soin de réséquer entièrement toute la région de l'os infecté. Dans le lieu de ponction, la cavité sera curetée méticuleusement; pour cela on emploiera des rongeurs, des hémostats ou des pinces.

Si le kyste n'a pas été ponctionné, on emploiera pour l'extraire des instruments plats ou à extrémité émoussée.

Il peut se présenter des cas où l'on se trouve en présence d'un patient affligé d'une formation kystique accompagnée de conditions aiguës. Il est alors recommandé de réduire d'abord les symptômes aigus, après quoi on pourra, à une date ultérieure, procéder à l'ablation du sac kystique. Le drainage de la cavité se fait à travers une ou deux ouvertures laissées entre les sutures.

Dans les cas des kystes volumineux nécessitant l'emploi de la gaze pour combler la cavité, on emploiera de la gaze vaselinée pour la première applica-

tion, afin qu'elle puisse être aisément retirée de la plaie, après un délai de 48 heures. Ceci a encore l'avantage d'éliminer l'hémorragie post-opératoire. La gaze doit être changée toutes les 24 heures, après la première application jusqu'à l'apparition du tissu de granulation. On supprime alors l'emploi de la gaze qui peut être remplacée par de la pâte à os.

L'usage de la gaze tend de plus en plus à disparaître pour être remplacé par celui du Gelfoam, qui, grâce à sa propriété de se résorber, apporte cet avantage considérable à savoir que la plaie peut être suturée immédiatement et sans que le patient soit obligé de revenir pour le changement journalier. Ce produit actuellement à l'essai semble donner des résultats remarquables tant du point de vue d'une ostéogénèse rapide que de celui de la préservation de l'hémorragie post-opératoire. Les résultats sont encore bien plus marquants quand il est employé avec de la pénicilline. Nous ne saurions trop recommander l'emploi de ce nouveau médicament distribué par la compagnie Upjohn.

2o *La méthode de Partsh.*

Cette méthode doit s'employer dans tous les cas où l'extirpation d'un kyste est susceptible de mettre en danger quelque structure importante, ou bien rend inévitable l'ouverture d'un sinus sain.

Technique. On pratique une ouverture curviligne à concavité inférieure à travers la membrane muqueuse au-dessus de l'aire du kyste. La muqueuse gingivale est alors disséquée et retractée bien au-delà de la limite marginale du kyste. Une ponction est opérée à travers la paroi du kyste et on aspire la totalité du contenu kystique. On enlève alors entièrement la membrane muqueuse et la partie de l'os recouvrant le kyste de façon à exposer complètement ce dernier. A l'aide du rongeur, on régularise les bords de la cavité pour prévenir l'irritation des tissus mous. On obtient un plein succès en exposant franchement et complètement le kyste par une large opération. Les dents baignant dans la

cavité doivent être enlevées, ou bien, si elles doivent être conservées, on pratique la résection de leurs racines; c'est l'apectomie.

On prend soin de ne pas déchirer l'épithélium de revêtement du kyste qui doit demeurer en place. S'il survient une hémorragie, la cavité peut être temporairement bourrée avec de la gaze imbibée d'une solution d'épinéphrine. La membrane muqueuse précédemment retractée est alors remise en place, de manière à recouvrir seulement le bord supérieur de la cavité kystique. On la suturera, si nécessaire, en cette position. La cavité est alors remplie avec de la gaze qui est laissée à demeure pendant 48 heures, pour la première application. Après cela, elle est changée toutes les vingt-quatre heures. Dans bien des cas, on emploie de la gaze iodoformée. De la gaze imbibée d'une pâte d'oxyde de zinc et d'Eugénol donne aussi de très bons résultats.

Dans cette opération, l'épithélium de la muqueuse buccale devient la continuation de la portion postérieure de la paroi kystique. Celle-ci assumera à la fin des caractères d'une membrane muqueuse normale. L'opération est suivie par une décroissance de l'étendue et de la profondeur de la cavité osseuse et tout ce qui reste est une légère dépression de la surface du maxillaire.

30 La méthode chimiothérapique.

Cette nouvelle méthode présentée par le docteur Marcel Darcissac, au VI^e congrès annuel de stomatologie à Paris, du 21 au 26 octobre 1929, et publiée pour la première fois dans la Revue de Stomatologie en mai 1930, était exclusivement utilisée par l'auteur pour la stérilisation rapide des canaux et des foyers apexiens par l'acide trichloracétique. Plus tard, grâce à de nombreux cas de kystes volumineux du maxillaire, parfois suppurés, traités à l'aide de l'acide trichloracétique, toujours après drainage au thermo-cautère, le docteur Darcissac put émettre cette constatation à savoir que *"l'acide trichloracétique se suffisait à lui-même dans cette cure et que l'intervention chirurgicale avec tous ses risques devenait inutile"*.

Voici quelques points d'ordre pratique, relatifs à l'emploi de l'acide trichloracétique et à son action pharmacodynamique.

Sous quelle forme et à quelle concentration doit-il être employé?

"On sait que l'acide trichloracétique se présente sous la forme de cristaux blancs transparents très hygrométriques: en faisant tomber quelques gouttes d'eau dans le flacon qui les contient on obtient immédiatement la déliquescence de toute la masse cristallisée".

C'est cette solution concentrée que l'on utilise, sans aucune dilution, en la maintenant soigneusement à l'abri de l'air dans un flacon bouché à l'émeri.

Quelles sont les précautions à prendre dans son emploi?

"On ne doit pas oublier que si son action en milieu humide est limitée en profondeur du fait de la neutralisation par les liquides de surface, on doit avoir soin de ne pas l'appliquer en excès. La mèche imbibée d'acide doit être essorée entre deux compresses avant sa mise en place. Les tissus voisins seront protégés par des compresses ou un corps gras, en se rappelant qu'appliqué sur la peau sèche, ou la muqueuse des lèvres, il déterminera une brûlure qui restera superficielle si un lavage à l'eau est fait rapidement. Il peut aussi être employé en pulvérisation avec succès, pour le traitement des kystes volumineux suppurés de la branche montante difficilement accessible au tamponnement par mèches imprégnées d'acide."

Pour ne pas prolonger inutilement notre sujet, nous nous abstenons de relater les trois observations signalées par l'auteur dans lesquelles l'acide trichloracétique a été employé avec succès après drainage au thermocautère.

Remarques: Dans les cas de petits kystes situés dans la partie antérieure du maxillaire supérieur au-dessus des apex des incisives et des canines, lorsque toutefois la portion de l'os situé dans cette région est intacte, on peut procéder à un traitement de canal que l'on fait suivre d'une apectomie, ou ablation de l'affec-

tion à l'apex de la dent (1). Si le traitement de canal n'est pas suivi d'apectomie, dans le cas où ce traitement devrait être appliqué à deux dents, on procède à l'extraction de l'une d'entre elles et le drainage de la cavité se ferait naturellement par l'alvéole de cette dent.

Dans des cas exceptionnels, où le mode de vie, l'éloignement de la demeure du patient constituent un empêchement à sa présence régulière aux rendez-vous, on peut pratiquer une apectomie accompagnée d'un traitement de canal immédiat. Ce dernier procédé est encore à l'essai à l'Université de Montréal, et de nombreux cas au cours desquels on a employé le Gelfoam avec de la pénicilline, semblent montrer une régénération osseuse rapide avec un minimum de réactions post-opératoires.

Discussion

Il existe donc deux méthodes pour le traitement des kystes radiculaires:

1o La méthode chirurgicale, comportant: a) la méthode d'énucléation complète; b) la méthode de Partsch.

2o La méthode médicamenteuse connue sous le nom de traitement simplifié des kystes radiculaires par l'acide trichloracétique.

A en juger par les critiques autorisés, ces méthodes ont leurs bons et leurs mauvais côtés.

Beaucoup d'auteurs, en effet, sont d'avis que seule la méthode d'énucléation complète est susceptible de donner des résultats satisfaisants dans le traitement des kystes radiculaires. Dechaume nous dit que "*le traitement des kystes doit comporter l'énucléation de la poche kystique et le traitement de la dent causale*". D'après cet auteur, l'énucléation est nécessaire pour préserver le malade de la dégénérescence maligne, car, dit-il "*la marsupialisation, même suivie de cautérisation de la poche, est discutée*".

Bernier, lui, croit que les petits kystes peuvent être traités avec satisfaction par la méthode d'énucléation complète alors que la méthode de Partsch, avec peut-être quelques légères modifications, doit être employée dans les cas des grands

kystes. C'est surtout le curetage chirurgical dans la méthode d'énucléation complète qui semble être le plus condamnable, de dire les partisans de la méthode médicamenteuse, dont le protagoniste est le docteur Darcissac. Ce curetage, d'après lui, peut être incomplet et n'est pas sans danger. En effet, dans les kystes à accès difficile, comme ceux de la branche montante du maxillaire, on ne peut exécuter aucun curetage correct, d'où danger de récurrence. En outre, il peut se présenter des cas où l'os constituant la paroi interne du kyste, devient tellement mince qu'une perforation de cette paroi devient inévitable. En outre, ce curetage offre encore la possibilité de léser des structures importantes quand la situation du kyste oblige l'opérateur à travailler en présence du nerf dentaire inférieur ou de la membrane de Schneider du sinus maxillaire. Dans la méthode de Partsch, le danger du curetage radical est écarté, mais de l'avis de Berger, la restauration prothétique est rendue difficile à cause de la dépression qui suit le remplissage toujours imparfait de la cavité. De plus, le maintien de l'hygiène est difficile tandis que le nouveau tissu osseux qui s'est formé demeure dans un état relativement débile.

Tout ceci semble plaider grandement en faveur de la méthode du docteur Darcissac. Avec cette méthode, la chirurgie n'a pas ou presque sa raison d'être et le curetage devient inutile. "Le curetage peut et doit être évité" dit le docteur Darcissac, qui prétend qu'il est possible de traiter efficacement tous les kystes du maxillaire et même les volumineux "*kystes suppurés*" de la branche montante à l'aide de tamponnements à l'acide trichloracétique après ouverture et drainage au thermo-cautère, alors que tout autre mode d'intervention serait susceptible de causer des dommages irréparables comme la résection du maxillaire, la perforation du sinus ou la lésion du nerf dentaire alvéolaire. La méthode du Dr Darcissac constitue sans aucun doute une belle innovation dans le traitement des kystes radiculaires, témoins les cas remarquables publiés dans la Revue de Stomatologie de mai 1930.

Pourtant, certaines expériences complémentaires seraient peut-être nécessaires pour s'assurer si l'emploi de l'acide trichloracétique est entièrement sans danger. Peut-être aussi pourrait-on trouver d'autres médicaments susceptibles de donner des résultats aussi satisfaisants, sinon meilleurs que celui recommandé présentement. En tout cas, on doit reconnaître que la méthode chirurgicale bien conduite a donné de nombreux résultats qui font, qu'à l'heure actuelle, elle est encore employée dans la majorité des cas. Certes, si le docteur Darcissac condamne "*le curetage chirurgical*", il n'est pas complètement opposé à toute chirurgie et nous sommes prêts à reconnaître avec lui que la méthode médicamenteuse qu'il préconise doit tout au moins être adjointe à la chirurgie pour la compléter.

Pour finir, nous pensons avec Winter que le traitement propre des kystes radiculaires, eu égard aux responsabilités chirurgicales, doit être conditionné par des facteurs esthétiques et physiologiques. "*Un organe complètement détruit doit être complètement enlevé, tandis qu'un organe partiellement détruit doit être*

partiellement enlevé" en vertu du principe à savoir: "*Half of loaf is better than none at all.*" Toujours est-il cependant que le mot d'ordre du chirurgien moderne doit être "*une restauration bienveillante et non une extirpation radicale*".

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Invitation au XIIème Congrès de l'Arpa Internationale, Madrid, 13-18 mars 1951

Le XIIème Congrès de l'Arpa Internationale est définitivement fixé du 13 au 18 mars 1951 à Madrid, soit la semaine précédant le dimanche des Rameaux. Les journées du mardi 13 au jeudi 15 mars sont réservées aux travaux scientifiques et à la présentation de films sur les Parodontopathies.

Le comité de l'Arpa Espagnole et le comité de la Société de Stomatologie Espagnole ont organisé pour le vendredi 16 mars une visite de l'Escorial et pour le samedi 17 mars une visite de Tolède. Le samedi soir 17 mars aura lieu le dîner officiel suivi d'un gala de festivités nationales.

Les congressistes pourront disposer de la semaine de Pâques, particulièrement émouvante et pittoresque, pour visiter l'Espagne.

Les travaux scientifiques doivent être annoncés dès maintenant au Prof. A. J. Held, Institut de Médecine dentaire de Genève, rue Micheli du Crest 43, Thèmes principaux:

- 1) Médecine interne et Parodontopathies.
- 2) Prophylaxie des Parodontopathies et traitement fonctionnel.
- 3) Présentation des thèmes principaux pour la section des Parodontopathies du Congrès de la F.D.I., Londres 1952.

Nous prions les confrères de préparer dès maintenant des travaux et de réserver leur temps pour le XIIème Congrès de l'Arpa Internationale, du 13 au 18 mars 1951 à Madrid.

Le Président:
Dr h.c. R. Jaccard

Le Vice-Président:
Prof. A. J. Held

Le Secrét. Général:
Dr U. Vauthier

L'ASSURANCE-SANTÉ*

par GERARD de MONTIGNY

Il est assez difficile à un dentiste de parler de dentisterie; les aspects qu'il peut traiter sont trop nombreux et il risque fort de tomber dans des détails techniques, qui deviennent assommants, pour des gens qui n'ont d'autre intérêt qu'à en finir le plus vite possible, surtout quand il s'agit du dentiste.

Et puis, voyez-vous, la description de notre travail ne peut que rappeler des souvenirs désagréables; la besogne que nous faisons n'a pas d'attrait; elle manque de "glamour." Nous dentistes, n'avons pas, comme le chirurgiens, d'opérations spectaculaires à faire illustrer dans le *Life*. Les gens ne se vantent guère des obturations, qu'ils ont eu à subir, chez le dentiste; mais pourtant, racontent souvent volontiers, à qui veut les entendre, les belles opérations qu'ils ont eues à l'hôpital. Nous accomplissons dans l'ombre une petite tâche, je dirais presque . . . répugnante, dont le public ne se pâme certes pas. Notre profession, à ma connaissance, n'a jamais inspiré de scénarios de films, comme Pasteur, the Snake Pit, The Men, etc., pellicules, qui ont contribué énormément à orner d'un halo la tête du médecin, du psychiatre ou du chirurgien. Je me surprends parfois à souhaiter qu'Hollywood réalise, un de ces jours, un grand film populaire sur les services rendus à l'humanité par le dentiste.

Cette production en vaudrait la peine, car l'avez-vous déjà réalisé, il n'y a pas une partie du corps humain, plus que la dent, qui ait été aussi approfondie, qui ait suscité autant de spécialistes; les uns qui traitent les dents d'enfants, le pédodontistes; les autres qui soignent les gencives, les périodontistes; ceux qui redressent les dents, les orthodontistes; une autre catégorie, les chirurgiens buccaux, qui extraient les dents; d'autres encore, qui remplacent les dents absentes, les prothésistes, etc., etc.

Les dents, à elles seules, entretiennent de grandes écoles dentaires et font vivre

toute une partie de la population: les dentistes, leurs assistantes, les techniciens, les fabricants d'appareils dentaires, les vendeurs, etc., etc. C'est donc dire que la dent est un organe des plus importants au point de vue économique comme au point de vue social . . . Je viens de prononcer le mot social . . . Je veux justement vous entretenir, durant quelques minutes, de dentisterie sociale ou si vous le voulez, d'une question, qui est à l'étude, aujourd'hui plus que jamais, au Canada et aux Etats-Unis, je veux parler de la socialisation de la médecine, de la dentisterie et de toutes les professions qui s'occupent de la santé des populations.

Depuis la première grande guerre de 1914, on ne peut le nier, un vent socialiste souffle sur le monde. Les unions ouvrières ont pris une ampleur internationale; chaque corps de métier possède son comité conjoint. Le nivellement des grandes fortunes personnelles s'accomplit sous l'effet de l'impôt. Le travailleur jouit de privilèges et d'un bien-être incroyables aux esprits du dix-neuvième siècle.

Cette organisation du travail exerce une influence irrésistible sur les gouvernants du monde, où le règne des royautes absolues et des dictatures est terminé. La démocratie signifie l'expression libre des opinions et ces idées s'imposent par le droit de vote. La masse nombreuse des travailleurs porte au pouvoir les dirigeants de son choix, des parlementaires qui soutiennent leurs principes et qui façonnent des lois mettant en acte cette idéologie. Voyez l'Angleterre, la nation peut-être la plus traditionnaliste du monde entier, le peuple le plus conservateur et le plus fier de son histoire qu'on puisse voir. Ses unions ouvrières ont élus les travaillistes parce que ceux-ci avaient un programme politique favorable à toutes les classes de travailleurs.

Cette politique comportait l'étatisation, au profit des citoyens, des grandes entreprises vitales du pays. Cette main-

*Conférence prononcée au Club Richelieu—Trois-Rivieres, le 24 août 1950.

mise de l'Etat sur toutes les activités essentielles de l'Angleterre ne devait pas tarder à se porter vers les professions libérales, sur celles de la santé d'abord.

Mais tout de même il ne faut pas se tromper. L'établissement d'un plan d'Assurance-Santé, en Angleterre n'a pas été le fait seulement du gouvernement travailliste, actuellement au pouvoir, mais a été élaboré lentement par tous les partis régnant depuis plusieurs années.

En 1948, on assista à l'élaboration d'un système dit d'Assurance-Santé, qui donne gratuitement à tous les habitants du pays, et même aux visiteurs, tous les traitements de santé, dont ils peuvent avoir besoin et même de ceux dont ils n'ont pas besoin. Ne nous a-t-on pas rapporté que de vieilles dames avaient obtenu du gouvernement l'autorisation de se faire confectionner jusqu'à trois per-ruques durant une année, le tout aux frais de la princesse! Consultations, opérations, hospitalisation, médicaments, traitements dentaires, extractions, dentiers, radiographies, examen de la vue, lunettes, etc., tout est gratuit.—John Bull solde la note!—Pour être spécifique et pour parler d'un domaine qui nous regarde d'avantage, dès le lendemain de la mise en force de cette loi d'Assurance-Santé, quatre-vingt pour cent des édentés, des porteurs de dentiers, des Iles britanniques remplirent des formules pour demander de nouveaux dentiers et soixante-quinze pour cent de ces réquisitions furent acceptées. C'est l'âge d'or du peuple anglais et des professions qui s'occupent de la santé, direz-vous? En apparence, oui, mais pour qui sait voir clair, je dirai, non.

Le système anglais a été organisé trop rapidement pour qu'il produise les fruits espérés. La mise en oeuvre d'un plan aussi vaste et aussi compliqué demandait des années de préparation. Formation d'abord d'un personnel en nombre suffisant pour répondre aux exigences de tous ces traitements gratuits, prodigués à qui les demande. Construction d'hôpitaux et de sanatoria capables de loger et disposant des facilités pour traiter convenablement tous ces malades ressuscités, révélés par la gratuité des services. Edu-

cation des populations sur la prévention des maladies plutôt que sur leur traitement. Consultations et collaboration avec les autorités médicales et dentaires du pays pour en venir à une formule acceptable à tous les partis intéressés.

Toutes ces préparations ont manqué en Angleterre; on a voulu faire vite et bien. On a fait vite, mais mal! Les professions médicales et dentaires sont mécontentes de cet état de chose et leurs représentations auprès du ministre Aneurin Bevan n'ont abouti qu'à un échec et qu'à une ignorance de leurs allégations.

Les corps de santé anglais sont mécontents pour plusieurs raisons. D'abord pour la bureaucratie, que conduit les rouages de cet organisme. Le médecin ou le dentiste anglais n'est plus maître dans son cabinet professionnel; le gouvernement, représenté par des fonctionnaires, qui souvent ne connaissent pas un traître mot de médecine dicte au praticien la liste des patients, qu'il doit traiter et comment il doit les traiter. Et pourtant, s'il est un endroit où la liberté des individus doit être sauvegardée, c'est bien dans le bureau de l'homme de l'art, qui doit accepter ses responsabilités et posséder toute la latitude nécessaire au bien-être du corps souffrant qui s'est confié à lui. Je passe sous silence le favoritisme et les faveurs accordées aux adhérents du parti au pouvoir.

Ensuite, le corps médical anglais reproche au gouvernement de n'avoir pas tenu les promesses faites quand le plan lui fut proposé. Sous prétexte d'économies, parce que le coût total de ce système d'Assurance-Santé dépasse de beaucoup les prévisions budgétaires — les journaux ne nous rapportaient-ils pas qu'en 1949, le gouvernement anglais a dû déboursier 650 millions, plus d'un demi-milliard de dollars, pour l'Assurance-Santé — le gouvernement décide donc de diminuer les honoraires promis aux médecins et aux dentistes quand le plan fut institué. Ces décisions sont sans appel et les association médicales et dentaires font en vain des représentations à ceux qui sont en charge de l'application et de l'élaboration de ces règlements.

Les médecins et les dentistes anglais

sont débordés d'ouvrage; les bureaux de ces praticiens sont littéralement assiégés et la qualité des traitements s'en ressent.

Les dentistes sont visiblement épuisés et plusieurs d'entre-eux ont dû prendre des repos forcés à la suite d'une besogne démesurément au-delà de leurs forces.

Le peuple est donc beaucoup plus mal soigné qu'il ne l'était avant la mise en force de cette loi et le but qu'on s'était proposé en établissant cette organisation, c'est-à-dire l'amélioration de la santé, n'a pas été atteint, au contraire, la qualité des traitements est moindre et le peuple se porte plus mal! La quantité des traitements est plus grande, mais la qualité diminue!

Ces constatations résultent d'un rapport publié par le secrétaire de l'Association Dentaire Canadienne, le Dr Don W. Gullett, après un séjour prolongé qu'il fit en 1948, en Angleterre; au cours de ce voyage, notre secrétaire eut des entrevues avec les dirigeants du Ministère de la Santé, avec les fonctionnaires du gouvernement anglais chargés de l'application du plan, avec les représentants de l'Association Dentaire Anglaise, avec des dentistes et des citoyens de toutes les parties du pays. Son enquête, comme on peut le voir ne couvrait pas seulement un côté de la médaille, mais scrutait toutes les faces du problème et était de nature à donner un aperçu des plus justes du rendement pratique du système d'Assurance-Santé anglais.

Cet examen approfondi était justifié par les tendances du gouvernement canadien à ce moment, de copier l'expérience anglaise pour en doter notre pays.

D'autres nations ont établi des systèmes qui diffèrent de l'Assurance-Santé de Grande-Bretagne et qui donnent un rendement peut-être supérieur à celui obtenu dans ce pays. Le temps ne me permet pas de vous citer plusieurs exemples de ces systèmes, mais si vous m'en permettez, nous verrons ensemble, brièvement, les grandes lignes de ces organisations de quelques pays.

En Europe, depuis longtemps, l'Etat aide d'une façon ou de l'autre les petits salariés à acquitter leurs frais médicaux et dentaires. Les méthodes sont différentes

et sont adaptées aux besoins particuliers des citoyens.

Par exemple, en France, le gouvernement remet à tous les employés, sans tenir compte de leur salaire, les sommes qu'ils ont dû déboursier pour se faire soigner ou se faire traiter les dents. La population française n'apprécie pas beaucoup cette aide gouvernementale, pour la raison bien simple que les salariés en France représentent la minorité des habitants, dans ce pays où il y a une infinité de petits bourgeois, propriétaires d'établissements commerciaux ou d'artisans dans un domaine ou dans l'autre.

En Hollande, le système est différent. Le gouvernement remet une partie des déboursés faits pour les soins médicaux et dentaires à tous ceux qui ne gagnent pas l'équivalent de \$1500.00, par année.

Et c'est plus de soixante pour cent des gens de ce pays qui bénéficient de ces octrois. Le côté intéressant de l'organisation hollandaise est que la prévention des maladies dentaires est mise en avant du traitement, c'est-à-dire que le pourcentage de la remise faite aux patients est plus forte, si le patient fait obturer des dents et plus faible, si le patient fait extraire et remplacer ses dents. Pour être plus concret, disons qu'il en coûtera à un individu, environ .10 pour une obturation de \$3.00 tandis qu'un dentier le forcera à déboursier \$4.00 pour une prothèse, qui en coûte \$10. On voit donc que le Hollandais de petit moyen, paiera en définitive environ 3% du coût total, s'il s'agit de prévention et il paiera environ 40% du coût total, s'il s'agit de traitements radicaux, comme l'extraction et le remplacement des dents.

Les deux seuls pays au monde, où il n'existe aucune d'organisation sociale pour la santé des populations sont le Canada et les Etats-Unis. Nous avons, il est vrai, les lois d'Assistance Publique, de la Commission des accidents du Travail, qui s'occupent d'aspects sociaux de la maladie. Des compagnies d'assurances, la Croix Bleue par exemple, soldent les frais de certaines maladies et de certains accidents de leurs souscripteurs, mais par Assurance-Santé, nous voulons dire un organisme d'Etat qui, évidemment, à l'aide

de taxes prélevées à la source ou autrement, paierait les frais médicaux et dentaires pour ses citoyens.

Au Canada, nous n'avons encore aucune sorte d'organisation du genre, mais le travail d'élaboration est commencé. Depuis quelques années, le gouvernement fédéral multiplie ses enquêtes et compile des statistiques pour trouver une solution à ce problème.

Le 14 mai 1948, le gouvernement d'Ottawa accordait aux provinces des octrois spéciaux pour entreprendre des enquêtes sur l'état et les besoins sanitaires des populations et pour construire ou agrandir des hôpitaux; des sommes considérables étaient mises à la disposition des organismes publics de santé pour augmenter leur personnel et leurs disponibilités. C'était le premier pas officiel posé par l'Administration vers l'établissement d'un organisme d'Etat d'Assurance-Santé.

A cette occasion, des commentaires de presse disaient: "Le gouvernement espère que dans deux ans un plan d'Assurance-Santé, du moins partiel, sera en opération au Canada. Nous croyons que l'hospitalisation sera d'abord réglée, ensuite les soins médicaux; plus tard les soins dentaires pour les enfants d'âge scolaire, suivis par les soins dentaires de toute la population."

Les relevés faits en 1939, 1944, 1945, 1946 sur les revenus des médecins et dentistes par le Ministère du Commerce sont des indices des intentions du gouvernement dans l'évaluation des services de santé, cadrant dans le vaste plan d'Assurance-Santé. La chose aurait été plus hâtive, si l'accord proposé, il y a environ deux ans, entre les provinces et le pouvoir central avait été réalisé. On peut prévoir que si on trouve un terrain d'entente fédérale-provinciale sur les nombreuses questions en litige, l'organisation ou la mise en vigueur d'un plan d'Assurance-Santé sera, bientôt après, un fait accompli.

Il faut bien comprendre que la profession dentaire canadienne n'est pas opposée, dans l'ensemble, à un système d'Assurance-Santé pour la population. Les dentistes réalisent qu'il n'est pas

facile aux petits salariés- surtout aux familles nombreuses- de consacrer un item pécuniaire assez onéreux aux soins dentaires adéquats de toute une famille. Les membres de la profession- plus que tout autres- se rendent compte de l'état lamentable de l'hygiène dentaire d'une grande partie de nos gens et souhaitent qu'une organisation nationale améliore cet état de choses et favorise un meilleur état de santé. Les dentistes connaissent les tendances modernes des populations, qui réclament d'avantage de leurs administrateurs. En un mot, les dentistes savent les grands avantages, qui découleront de la création d'un plan d'Assurance-Santé.

L'Association Dentaire Canadienne, qui groupe sur un plan national les organisations légalement constituées de chaque province, a été je crois, le premier groupement professionnel concerné à soumettre aux autorités un projet concret touchant l'établissement d'un système d'Assurance-Santé pour le Canada. Après des études approfondies des organisations existant dans d'autres pays et surtout après en avoir considéré les résultats, après des voyages entrepris par des autorités en la question, pour étudier sur place les modalités et l'application pratique de ces lois, après avoir fait des relevés sur les disponibilités de la profession dentaire canadienne, mises en regard des besoins de nos populations, notre Association a proposé au gouvernement fédéral le plan suivant:

1° Aide fédérale, par le truchement des gouvernements provinciaux, puisque le domaine de l'enseignement est du ressort provincial, aux Universités canadiennes, pour leur donner les facilités de former un plus grand nombre de dentistes, chaque année. Il y a cinq facultés dentaires actuellement au pays: Dalhousie, en Nouvelle-Ecosse; McGill et Montréal, dans le Québec; Toronto, en Ontario; l'Université d'Alberta à Edmonton. Des chiffres publiés en mai 1950, montrent qu'en 1938, il y avait un dentiste par 2672 de population. En 1950, il y a un dentiste par 2928 de population, soit une diminution de dentistes au service du public. En 1952, si la population s'accroît

au même rythme, il y aura un dentiste par 3200, parce que le nombre des diplômés ne variera guère dans les années à venir, puisque les facultés dentaires sont remplies à capacité et on ne peut trouver les moyens pécuniaires d'augmenter leurs facilités. Le rapport de la Commission Massey, qui a récemment fait une enquête sur la culture et l'enseignement au Canada présentera peut-être des suggestions dans ce sens. Avec le nombre de dentistes actuellement disponibles, il est inutile de songer à l'établissement d'un système d'Assurance-Santé. Le nombre des dentistes est insuffisant pour une tâche semblable.

2° Campagne d'éducation—Notre Association désire qu'une vaste campagne soutenue soit entreprise pour éduquer nos gens sur la chose dentaire. Un plan d'Assurance-Santé doit avoir, comme but ultime, l'amélioration de l'état de santé des populations. Et la moyenne de santé est meilleure quand les citoyens prennent les moyens de prévenir la maladie, ou encore de procurer aux générations montantes un meilleur régime de vie, pour en faire des hommes et des femmes plus forts que ceux qui les ont engendrés. C'est ainsi qu'une race s'améliore et se fortifie au cours des siècles! Si on regarde la question au point de vue dentaire, l'éducation de nos populations doit porter sur l'alimentation rationnelle, sur la prévention de la carie ou du moins sur la prévention du développement de ces caries, quand elles sont installées dans les dents, sur l'élimination des anomalies dentaires durant le jeune âge, pour empêcher ou détourner des infirmités adultes, qui compromettent l'existence des dents.

Il y aurait plusieurs causeries à faire sur ce seul aperçu de la question, mais il faut abrégé et résumer cette idée en disant qu'un plan d'Assurance-Santé serait un faillite, incontestablement, si les gens en profitaient pour faire extraire leurs dents et les faire remplacer par des prothèses.

3° Inclusion dans ce plan, de tous les

citoyens, sans distinction de revenus, comme d'ailleurs est constitué le système des allocations familiales.

4° L'Association Dentaire Canadienne suggère que les traitements dentaires soient donnés d'abord aux enfants de moins de sept ans, pour la première année.

5° Régie et contrôle de l'organisation laissés aux corporations légales de chaque province. L'enquête, qui aura été faite dans toutes les parties du pays sur les besoins dentaires de ses habitants, fixera le montant annuel que le gouvernement fédéral contribuera à chaque province, pour mener à bien son entreprise. Les corporations légales des dentistes des provinces, et dans le Québec il s'agira du Collège des Chirurgiens-Dentistes de la Province de Québec, fixeront elles-mêmes la liste des honoraires, approuveront les réquisitions des citoyens, organiseront des comités de surveillance, rémunéreront les dentistes, en un mot administreront leurs propres affaires.

Cette procédure élimine l'immixtion des fonctionnaires dans le rouage professionnel, conserve aux dentistes leur intégrité et leur caractère professionnel et prévient le jeu incontrôlable du favoritisme amené par les adhésions plus ou moins étroites au parti au pouvoir et par les influences politiques, qu'on appelle communément l'art des ficelles.

Voici les grandes lignes du plan proposé au gouvernement canadien par l'Association Dentaire pour régler la question d'Assurance-Santé. Les autorités fédérales ont bien accueilli ces propositions et les ont acceptées en principe. Mais les événements récents reportent à plus tard l'introduction d'une telle mesure. La hausse continuelle du coût de la vie, la guerre de Corée, les mésententes provincio-fédérales, sont des facteurs qui retardent l'établissement d'un plan d'Assurance-Santé au Canada. Je crains bien, Messieurs, que vous ayiez encore à payer de votre poche votre prochaine visite au dentiste!



NOUVELLES DE L'ASSOCIATION

Rappel de la loi du Massachusetts.

L'an dernier, la Législature de l'Etat du Massachusetts amendait sa loi dentaire pour permettre d'enseigner à des jeunes filles à faire des obturations dans des dents temporaires, sous la surveillance d'un dentiste, dans des cliniques ou des dispensaires. Le cours, d'une durée de deux ans, devaient se donner au Forsyth Dental Infirmary, de Boston. Le projet aurait été financé par le Children's Bureau of the Federal Security Agency, de Washington.

Cette modification à la loi dentaire et la mise en marche de ce programme ont été réalisées, sans que la dentisterie, en tant que profession organisée, ait été consultée.

A la réunion d'octobre de l'Association Dentaire Américaine, une dénonciation vigoureuse de cette loi du Massachusetts a été formulée. La résolution se lit comme suit:

"Il est résolu que l'Association Dentaire Américaine déplore la non-consultation apparente de la Législature du Massachusetts avec la Société Dentaire de l'Etat du Massachusetts, avant d'inaugurer ce programme, en dehors de la connaissance et sans l'approbation de l'Association Dentaire Américaine, et de plus:

"Il est résolu que tout programme, qui a trait à la formation d'un personnel d'un calibre inférieur dans un but d'expérience ou autre, devrait être élaboré et entrepris seulement avec la connaissance et la collaboration des associations locales respectives et de l'Association Dentaire Américaine pour que la santé et le bien-être social des populations soit sauvegardés."

Depuis la mise en force de cette loi, ce projet a soulevé une émotion considérable aux Etats-Unis et dans les milieux, qui s'occupent de santé publique dans d'autres pays, y compris le Canada.

Il été suggéré qu'une "expérience" semblable était en train d'être tentée au Canada.

Le projet a été condamné par la Société Dentaire de l'Etat du Massachusetts et par d'autres organisations dentaires des Etats-Unis.

La Législature du Massachusetts, à sa dernière session, a rappelé cette loi autorisant la formation d'hygiénistes dentaires dans le but de leur faire obturer des dents. Le Gouverneur de l'Etat a signé ce nouvel amendement. Le projet de Forsyth a été mis en marche au mois de juillet. Aux dernières nouvelles, les dirigeants du Forsyth s'organisent pour mettre fin à cette initiative.

Enquête dans les facultés dentaires.

Depuis longtemps, le Conseil d'Enseignement Dentaire prépare une enquête dans les Facultés dentaires canadiennes. Les travaux préliminaires établissant des standards ont été terminés en 1948. Sous le titre: "Exigences requises d'une Ecole dentaire", ces exigences furent publiées et distribuées aux Ecoles dentaires et aux institutions préparant les étudiants aux études dentaires. Le dernier paragraphe de cette publication se lit comme suit:

"La conduite, que prétend suivre le Conseil, est d'allouer un certain espace de temps, après la distribution du fascicule, pour que les autorités concernées puissent effectuer tout changement, qui leur semble nécessaire. Après coup, à une date déterminée, le Conseil sera prêt à visiter les écoles dentaires, sur invitation, pour l'accréditation."

Durant la prochaine année académique, il est suggéré d'entreprendre cette enquête dans ces Ecoles. L'équipe, qui visitera les écoles sera constituée des Drs Harvey W. Reid, Toronto, A. L. Walsh, Montréal et le doyen A. C. Lewis, du Collège d'Enseignement, Toronto. Les Drs Reid et Walsh font déjà partie du Conseil d'Enseignement Dentaire et ont une grande expérience dans ce domaine. Le Dr Lewis est un expert dans la domaine de l'enseignement et a l'habitude de ce genre d'enquête.

Il a été décidé que cette enquête se perpétue continuellement et le travail des

trois premières années a été fixé. La Fondation Kellogg et l'A.D.C. contribuent, toutes les deux, aux dépenses de ce projet.

Le Conseil est d'avis que l'accréditation des Ecoles dentaires canadiennes aidera ces dernières et que des rapports publiés de temps à autre seront de nature à éclairer leurs dirigeants.

Le but principal de cette enquête est de contribuer à l'amélioration de l'enseignement dentaire. Le Conseil désire être utile pour que l'enseignement, qui est donné aux étudiants, atteigne le plus haut niveau possible et, pour ce faire, collaborer avec les personnes responsables.

Délégué de Terre-Neuve.

Des nouvelles ont été reçues de Terre-Neuve, nous apprenant la nomination officielle du Dr E. P. Kavanagh, de St-Jean, comme membre du Bureau des Gouverneurs, pour cette province. Le Dr Kavanagh a assisté aux délibérations du Bureau des Gouverneurs, en mai dernier, sans titre officiel. Cette réunion avait été tenue, avant que l'Association Dentaire de Terre-Neuve devienne mem-

bre corporatif de l'A.D.C. Le Dr G. E. Mallam, de St-Jean, a été nommé rédacteur associé au Journal pour cette province.

Propositions d'hygiène dentaire.

Les autorités, qui s'occupent de la santé publique ont toutes reçu le pamphlet intitulé: "Propositions d'hygiène dentaire". Plusieurs lettres de félicitations nous sont parvenues de ces dirigeants des activités sanitaires.

La teneur du pamphlet a été préparée par le Comité d'Etudes sur l'Assurance-Santé et expose en termes simples la politique de l'Association sur cette question. Le texte est d'un domaine pratique et compris facilement par le grand public. Le Comité espère que les renseignements, qui y sont contenus, soient portés à la connaissance du plus grand nombre possible.

Tous les membres en ont reçu une copie. Des copies supplémentaires seront envoyées sur demande; elles peuvent être mises dans les salles d'attente et données à ceux que la chose intéresse.

Lettre aux Gouverneurs de l'A.D.C., vol. 5, no 30.

XIIème Congrès Français de Stomatologie

Le XIIème Congrès Français de Stomatologie aura lieu à Paris en 1951 dans la première quinzaine d'octobre; le Bureau est ainsi constitué: Président: Dr René VINCENT; Vice-présidents: Drs VILENSKI et CARVALLO; Secrétaire-Général: Dr FRIEZ; Trésorier: Médecin-Général GINESTET.

Le Comité d'organisation demande aux Confrères français et étrangers de bien vouloir prendre dès maintenant leurs dispositions pour assister et participer à cette manifestation scientifique à laquelle ils sont très cordialement conviés.

Le secrétaire Général recevra dès maintenant les adhésions et les sujets des communications (Dr. P. FRIEZ, 42, rue Notre-Dame des Champs, Paris 6^e).

... Les autres charmes sont purement matériels: une jolie bouche a quelque chose de divin: elle est l'interprète des âmes, la confidente des coeurs; elle seule peut faire d'aveu d'un tendre amour, en recevoir les hommages, en donner les preuves les plus délicieuses.

Encyclopédie de la beauté.

Les devoirs de l'homme dépassent les limites de sa famille et de son propre pays. La solidarité humaine, s'étendant au-delà des frontières de sa patrie, est le plus sacré de ses devoirs.

Georges VILLAIN—1881-1938



Secluded Cove in the Gulf of Georgia, British Columbia

"Man is at war with his fellows because he is at war with himself, and he wars with himself because he is at war with God, and until peace is made between the creature and the Creator there can never be any peace either in the human heart or among the nations of the earth."



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The Journal

OF THE CANADIAN DENTAL ASSOCIATION

VOL. 16

TORONTO, DECEMBER, 1950

No. 12

CROSS BITE IN CHILDREN[†]

by B. L. GAINSFORTH, D.D.S., M.S.,* Ogallala, Nebraska, U.S.A.

ONE of the most spectacular phases of orthodontic treatment is that which deals with anterior cross bite. One of the least spectacular phases deals with posterior cross bite. Each type is important but perhaps the anterior is more so because it is more disfiguring and also more inhibiting to acceptable function.

AETIOLOGY

The treatment of any condition should be preceded by a study of the cause of the defect. Logan and Kronfeld¹ have demonstrated, by serial histological sections of the heads of deceased children, that in early infancy the permanent tooth buds form occlusally and to the lingual of the developing primary teeth. Soon after birth these permanent tooth buds migrate to the lingual of the primary teeth and later take their places more or less apically to the erupted primary teeth. It is logical then, that some factor which prevents this complete alteration of position, may cause the permanent tooth to erupt lingually to the primary tooth which preceded it. Even so, the permanent tooth usually shifts labially in response to the balance of normal forces and takes its place in the arch.

If, however, eruption progresses far enough to lock the incisal of the opposing tooth before this migration takes place, a locked tooth, or cross bite may occur.

One of the most common conditions seen in the orthodontic or pedodontic practice is that in which the lower permanent incisors are erupting lingually to the primary incisors with apparently far too little space in the arch for them. This is considered an almost normal picture and many of these cases undergo sufficient change to accommodate the permanent teeth in their proper line of arch—but not always so. Extreme jumbling of lower incisors, sometimes coupled with unjustified extraction, may allow enough collapse of the lower arch to allow complete lingual positioning of some of the premolars. This same sequence in the upper arch will, of course, result in the more typical cross bite, that in which one or more upper teeth occlude at least one cusp to the lingual of the lowers.

Cross bite may be caused by prolonged retention of primary teeth, causing the permanent successors to erupt lingually from the proper position in the arch. Occasionally the roots of a primary tooth refuse to resorb when and where they should. The erupting tooth then takes the course of least resistance, which may not carry it in the desired direction.

Premature loss of a primary tooth followed by a closure of space may cause the permanent successor to erupt lingually by virtue of its crowded condition and produce a cross bite. One is confronted here with a choice between

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†Presented at University of Toronto, Orthodontic Continuation Course, April 1950.

extraction of the lingually tipped tooth or a rather extensive orthodontic treatment to create the needed space and alignment.

The congenital cleft palate, with or without hare-lip, is usually accompanied by a severe cross bite. Here we have a shortage of the bony structure needed to oppose the natural forces exerted upon the buccal surfaces of the teeth by lip pressure, cheek pressure, atmospheric pressure, etc. Since all teeth are "floating" within a balance of forces this disruption in that balance of forces is more than enough to produce a severe deformity. Treatment is most difficult in the cleft palate since the scar tissue which is present, as a result of surgical closure, defies orthodontic movement. A simple spreading laterally of the maxillae occurs rather rapidly however and once the needed width has been obtained, a prosthetic appliance may be placed on a permanent basis. This appliance, while prosthetic in nature, will also serve as a retainer of the changes accomplished.

Two cases have been under the observation of the writer in which cross bite was the result of burns received by children less than two years of age. One was a boy of 16 months who placed the hot end of an extension cord in his mouth. Four plastic operations within the following five years failed to relieve the tissue tension from the resulting scar. The second child, also a boy, found a can of lye and tried to eat the contents. He also received a scar condition which tightened and forced the teeth out of line. The first step in the treatment of this condition is for the plastic surgeon to relieve the tension and enlarge the mouth to make orthodontic aid, the second step, possible.

Improper sleeping posture has been given as a possible cause of cross bite. Higley² has traced many conditions of malocclusion, including cross bite, to faulty sleeping habits. The child who continually sleeps on the same side, with his fist doubled beneath his face, may exert continuous pressure upon the dental arch enough hours of the 24

to be orthodontically significant. Correction of the habit may be brought about by sewing wooden blocks on one side of the sleeping garment to force the child to sleep on the other side, or otherwise limiting arm movement by the design of the sleeping garment.

As shown by Higley³, the cross bite may be but a part of a complicated case of malocclusion and in that event its treatment is a part of a complete orthodontic procedure. Many times, however, it is desirable to limit correction to one or two teeth for one of the following reasons: 1. There may be no other treatment necessary; 2. It may be economically impossible for the patient to undertake the ideal treatment; 3. It may be too many miles to the nearest orthodontist. With the above in mind let us consider the locked incisor.

TREATMENT

In contemplating an artificial shift of an incisor from a lingually locked position it is important to note the space available for that tooth in the arch. It is impossible to move a central incisor 9 mm. wide into a space which is only 7.6 or 8 mm. in width without first making some provision for the additional space needed. The opening of a space may be carried out in the method favoured by the individual operator, whether it is a labial arch-wire with coil-spring, vertical spring loop, lingual arch with auxiliaries, or acrylic Hawley-type pedodontic appliance with auxiliary springs attached.

One popular method of "jumping" a locked incisor is by the use of the tongue blade. This method has been presented frequently in the literature and simply consists of a course of exercises in which the patient holds a tongue blade with its tip beneath the locked incisor and the opposite side of the blade, bearing down upon the incisal edges of the lower anterior teeth, forming a pry or leverage. This pressure is applied by prying with the wooden blade for several minutes at a time and about four times a day. The writer has seen this treatment operate

successfully in only two cases. However, because of its simplicity, this method is worth trying for any child who seems bright and cooperative. The frequent failure of this method is perhaps due first to the difficulty in obtaining faithful cooperation in a young patient and secondly because during the hours between treatments the tooth is being pounded back to its former position by forces of mastication and occlusion.

In this discussion emphasis will be placed on the use of the extension crown, conclusions to be drawn from 45 cases carried out by the writer, and others which have been observed in the hands of other operators. One post-treatment examination was recently made of a mouth where this method was used to correct locked incisors in 1925 by the writer's father who used the extension crown soon after the turn of the century.

The extension crown, sometimes called the sled-runner crown, or shovel crown, is usually placed over a maxillary incisor. The crown is constructed with an elongated incisal edge which will contact the labial surface of the opposing incisor or incisors when the jaws close. (Fig. 3-B). The elongated or extended surface of the crown thus acts as a guide plane. When properly used in carefully selected cases prompt and gratifying results may be obtained from the use of the extension crown.

CASE SELECTION

A child with one or more locked incisors should be carefully observed in order that the rest position of the mandible may be noted. If, when the mandible is in its most retruded position the locked incisor is still far to the lingual, the extension crown is not indicated. Instead, a full orthodontic appliance is advised whereby the tooth may be banded and controlled by means of an archwire. If, however, the child can, with effort, bring the upper and lower incisors to an almost edge to edge relationship, the extension crown may be employed.

TECHNIQUE

The extension crown may be made in a number of ways. The first ones were made of 22 k. plate gold in the manner of shell-crowns with the extended guide plane soldered to the incisal edge and reinforced for strength.

A more accurate positioning of the guide plane may be obtained by a casting. The waxing of the pattern for a cast extension crown is carried out on an investment die, (Fig. 1-A), using 28 or 30 ga. casting wax. The extension or guide plane is formed by attaching two or more layers of casting wax to the incisal of the waxed crown and forming the extension with a curvature to the labial. This method of waxing results in a crown of even thickness thus facilitating removal after treatment. Some operators leave a labial window to facilitate removal. Even a hole drilled through the labial surface of the crown at the level of the incisal edge of the tooth will make removal somewhat easier by providing a place to insert an instrument. The same hole allows an easier escape of excess cement at the time of setting the crown and does not provide a leakage hazard because of the shortness of treatment time.

If 28 ga. wax is not available to the operator he may place a small square of thin gold plate on the labial of the die and wax up the rest of the crown with inlay wax. This will provide a thin soft labial section which is more easily cut for removal.

Since there is a more than usual amount of metal lost through grinding in the final shaping of these crowns very good results have been had by casting them in silver. The softness of this metal makes removal quite easy. There may be an objection to the tarnishing of silver in the mouth but this is not too important since the device is not worn over a long period of time.

A prompt and time-saving service may be offered by first constructing a spot-welded chrome alloy pinch band and attaching a heavy gauge chrome alloy incisal extension by spot-welding

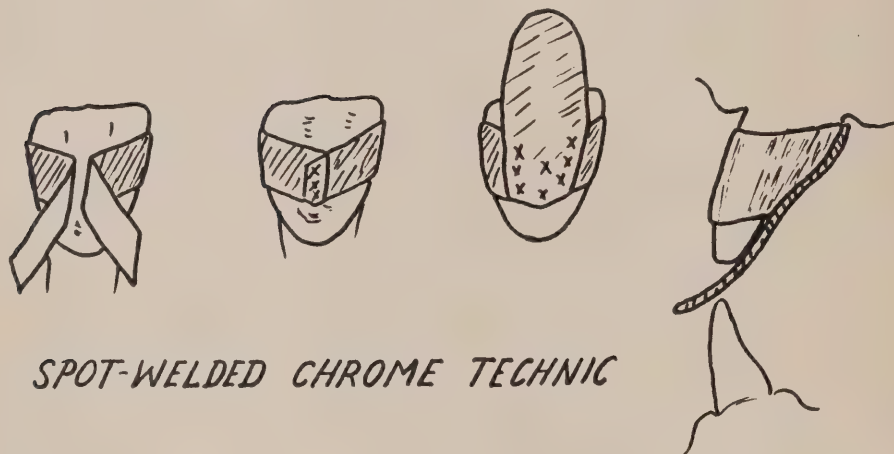
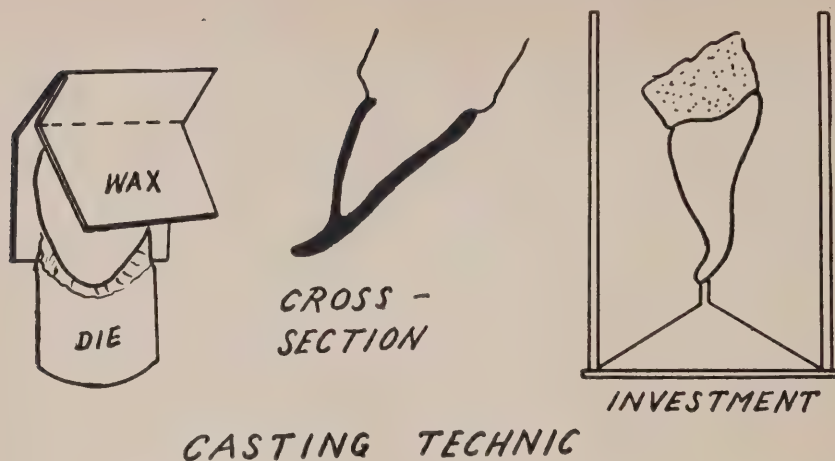


FIG. 1-A. The basic waxing steps of the extension crown for casting.
1-B. Steps in the construction of an extension crown by spot-welding showing the lingual pinch and the points (x) of welding.

to the band, (Fig. 1-B). The material represented in Figure 1-B and pictured in Figure 2 consists of a chrome-alloy guide plane 28 gauge or .015" in thickness attached to a band constructed of .003" chrome band material.

In the spot-welded technique it is somewhat more difficult to obtain the desired shape of the extension or guide plane than when a casting is used. However the spot-welded alloy guide plane is favoured for those patients who come a great distance and want

to reduce the construction time to one appointment.

CLINICAL CHARACTERISTICS

When the extension crown is first placed in the mouth the posterior teeth will be held apart. Surprisingly, the child is able to eat soft foods with very little discomfort. The incisors generally shift sufficiently and become unlocked in from three to seven days to allow the posterior teeth to assume their occlusal contact. The extension

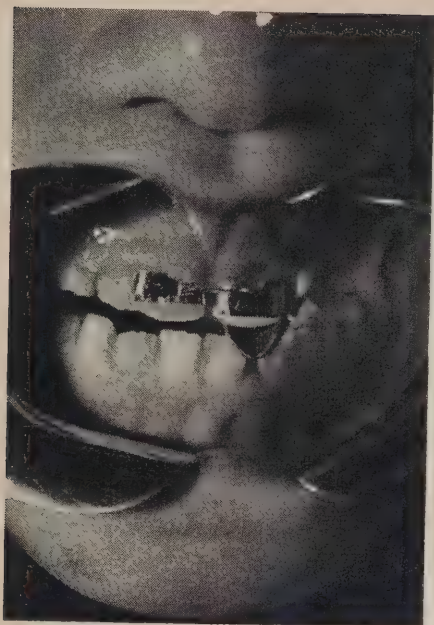


FIG. 2. An extension crown constructed by the spot-welding of chrome alloy. The right central is banded and ligated to the left central to close the diastoma.

crown may then be removed if the overbite of the formerly locked tooth is sufficient to retain it in its new position. This is the most successful retention in orthodontics. However, in the event that there was little or no overbite of the unlocked tooth, retention will not be automatic, since the extension crown usually causes a slight intrusion of the tooth to which it was attached. For such cases, the crown may be replaced by an orthodontic band which has extensions soldered to the labial and extending laterally over the labial surfaces of the proximating teeth. This band, with extensions, prevents the lingual relapse of the tooth and at the same time allows normal eruption to take place and restore sufficient overbite to create natural retention.

The shortness of treatment time in most of these cases is unbelievable. However, what appears to be an extensive tooth movement is partly optical illusion. First, it takes a very

slight movement of the locked tooth to place it to the labial of the opponent if proper case selection is carried out. Second, there is some reciprocal movement of the lower tooth, thus reducing by half the required movement of the locked tooth. Third, in most locked incisor cases there is some mal-positioning of the condyle in the glenoid fossa, and, upon the unlocking of the anterior cross bite the condyle automatically drifts back to its proper position with relation to the temporal bone.

A tooth to which an extension crown has been attached is in hyperocclusion. However, very little trauma occurs except during mastication. This is accounted for by the fact that during most of the hours of the day the mandible is held in "physiologic rest," which has been defined as the position in which the relaxed mandible is carried with the molar teeth out of occlusion slightly more than cusp height. If the crown, when tried on the locked tooth, opens the posterior bite greatly in excess of cusp height, an additional appliance is indicated.

The additional appliance used in combination with an extension crown is the lower acrylic plate constructed with occlusal bite blocks in the posterior, covering the molars and premolars or primary molars. The occlusal blocks are reduced by grinding until the extension crown is in slight hyperocclusion. At one week intervals the bite blocks are further reduced by grinding until they are no longer needed. The posterior acrylic bite blocks may also be used in combination with a full banded appliance, since they eliminate most anterior trauma during the critical movement.

One of the characteristics of the extension crown, which has been noted by nearly everyone who has used it, is as follows: If two teeth are locked in linguoversion an extension crown on one side of them will move both teeth to their labial position, (Fig. 3). If three teeth are locked, a crown on the centre one will usually move all three. This bears out the teachings of Oppenheim⁴, who has demonstrated that

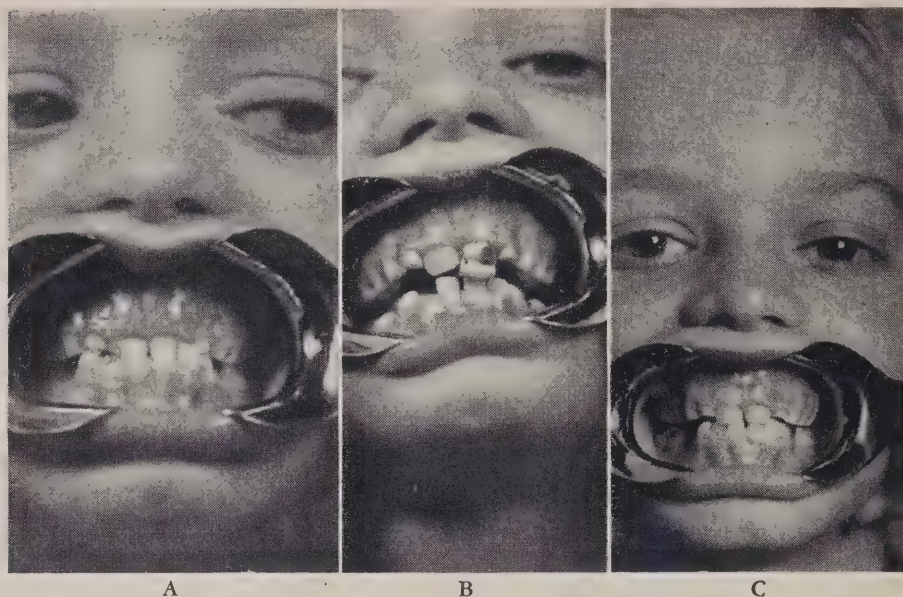


FIG. 3. A. Upper central incisors locked lingually to the lowers.

B. Cast silver extension crown, newly placed on left central.

C. Relationship of teeth ten days after placement of the crown. Both central incisors have moved to the labial by the use of a single crown.

gentle force applied to one tooth is transmitted to adjoining teeth via the transeptal fibres of the periodontal membrane if the force is not too great. If the force is too great the transeptal fibres are severed and only one tooth is moved. The fact that two and even three teeth may be moved with one extension crown would indicate that the forces of occlusion which cause the movement are within the limits of tolerance of the transeptal fibres.

Upon placement of an extension crown the child should be warned and his parents should be warned, emphatically, that while the crown is being worn, the child must not engage in rough play whereby he might receive a blow on the chin. Such a mishap, with one or two teeth in hyperocclusion to take the full impact, could easily result in the loss of an anterior tooth. Such a loss would be a tragedy to any boy or girl, though all the cases reported herewith have been fortunate in this respect.

In the diagnosis of cross bite, either anterior or posterior, the patient is examined first with teeth closed in centric and the mid-line observed. Note whether the mid-line of the teeth is in the mid-line of the face. Any deviation of the upper teeth from the mid-line is usually incorrect position of teeth and not incorrect maxillary position. Compare the mid-line of the upper teeth with the mid-line of the lower teeth when closed, (Fig. 4-A). If there is a disharmony in this relationship have the patient open slowly and note whether the mandible, upon slight opening, shifts to the correct mid-line relationship. If this shift to centre occurs, (Fig. 4-B), it may mean that there is simply a cusp or tooth locking which shifts the mandible to one side upon closing. Treatment begins with elimination of the locking condition, whether it is anterior or posterior.

A pseudo Class II relationship of molars may automatically disappear upon the unlocking of a single bicuspid in

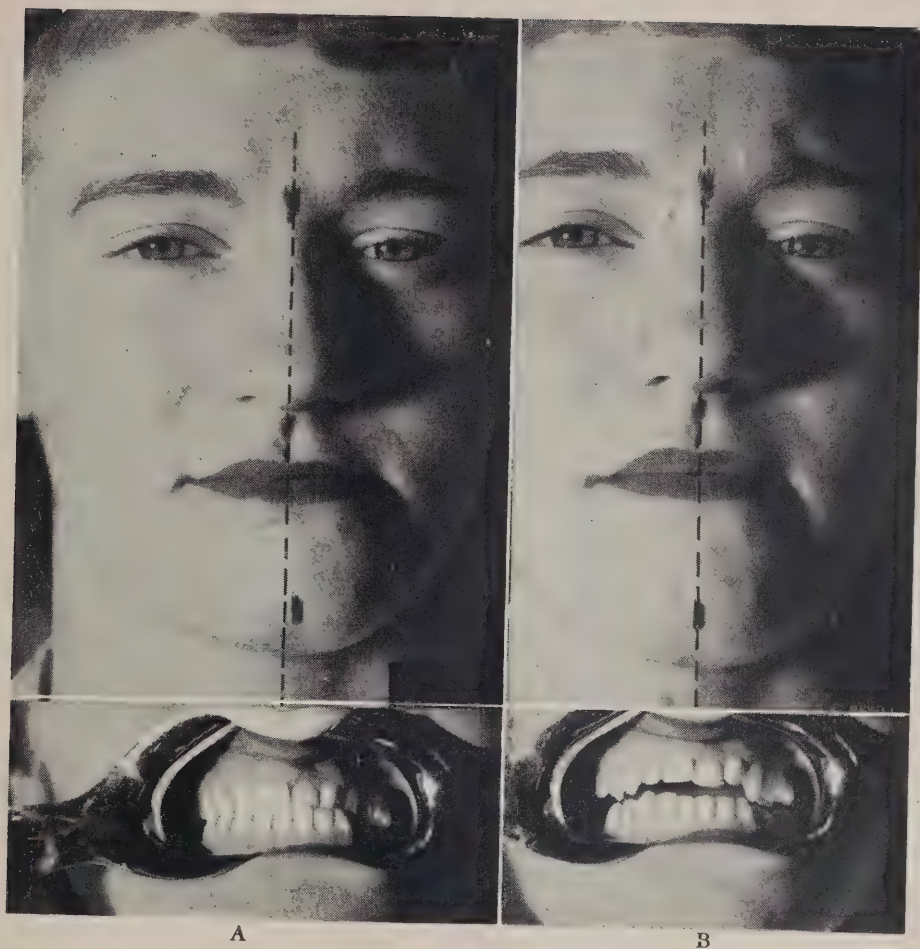


FIG. 4. Centre line of face drawn through nasion and sub-nasion points. (A) When the teeth are in occlusion the centre of the chin is to one side.

(B) Centre of chin has swung to the centre-line of the face upon slight opening of the teeth. (Landmarks indicated on face with a skin-pencil)

cross bite. The case illustrated, (Fig. 5), shows the shift which took place in the relationship of the upper and lower right molars when the right first bicuspids were moved into proper occlusion. Upper and lower labial archwires were used in combination with posterior acrylic bite blocks. No intermaxillary elastics were used.

One condition which may confuse the operator is that in which the mandible swings to one side, upon opening, because of an injured, diseased, or malformed condyle. Here the mandi-

ble always swings one direction upon opening. Upon having the patient go through the various mandibular movements, the mandible continues to swing just the one direction. The unilateral swing indicates a non-sliding condyle and the one which is defective is the one toward which the chin swings *i.e.* if, upon opening, the chin continues to swing to the right, then the right condyle is the defective one.

If the patient opens and closes with no change in mid-line relationship and the posterior teeth are in cross bite on

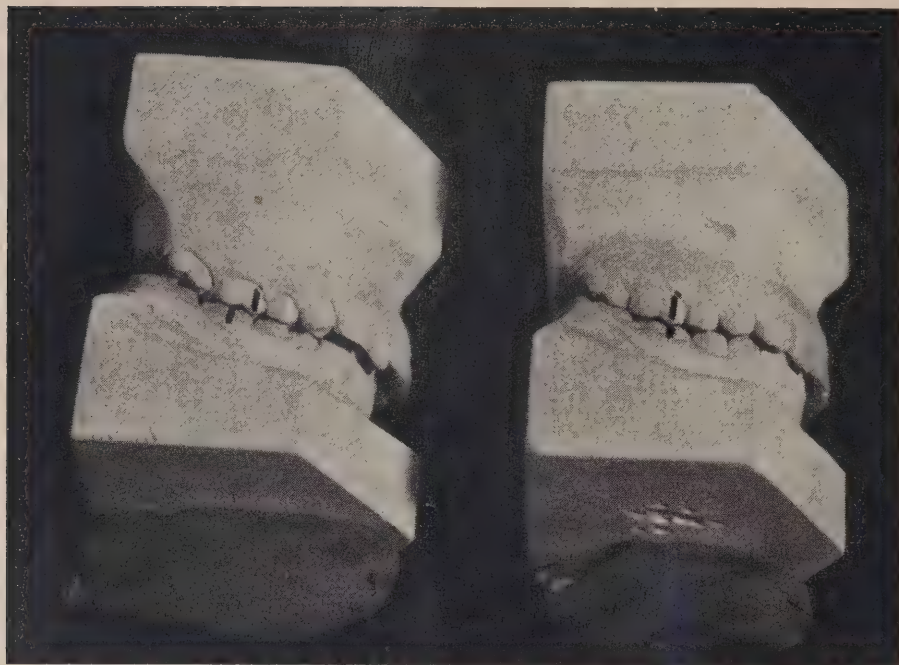


FIG. 5. Mesio-distal relationship of molars corrected automatically by the elimination of the cross bite of the first bicuspid.

one side when closed, the unilateral type of treatment may be necessary. Unilateral treatment is very difficult since there is no true anchorage in the mouth. Cross-elastics are favoured (from the lingual of one arch to the buccal of the opposing arch) in treatment of posterior cross bite, with well constructed upper and lower appliances. Additional anchorage has been obtained in some cases by the use of an acrylic plate attached to a fixed appliance either by clasps or fixed by wire ligatures. In the primary dentition a cross bite may sometimes be corrected by the use of an acrylic plate with an elevated inclined plane, incorporated into the design of the plate, to guide the malposed opposing teeth in the right direction.

Fortunately in most cases of posterior cross bite the upper arch is symmetrically narrow. When this is true the mandible, upon being slowly opened, shifts to a correct mid-line relationship. Frequently it is possible

for this patient to occlude properly on either side but not on both sides at once, *i.e.* a left working bite produces a right cross bite and a right working bite produces a left cross bite. Treatment of the symmetrically narrow arch consists simply of expansion by means of either buccal or lingual appliance or both. The operator should use the appliance which, with his training, gives him the best results.

In theory, retention should come about by the correct locking of the cusps, uppers to lowers. Practically, however, teeth have a dogged tendency to return to the position from which they were moved, and the cusp locking, in the posterior is not sufficient to hold them from doing so. Furthermore, the teeth are seldom occluded to their full locking of cusps except during deglutition and mastication. The mandible is carried most of the 24 hours of the day, as stated before, in a state of physiologic rest (with posterior teeth slightly opened), therefore cusp lock-

ing has no chance to be effective in retention in the posterior. With many operators the favoured retainer is one of the acrylic appliances which are held in the mouth by means of chrome alloy clasps and which can be taken out and cleaned by the patient at least three times each day. These same appliances may be constructed with bite plane extensions which make retention more certain and may even do some of the correcting.

SUMMARY

1. Cross bite may be but a part of a more complicated malocclusion.
2. Differentiation should be made between misplaced teeth or misplaced bony structure.

3. Treatment of any orthodontic condition should follow a study of the cause.
4. Various designs of extension crowns have given satisfactory results in selected cases.
5. If natural retention of a treated condition does not exist artificial retention must be employed.

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Résumé

- 1) Le "cross-bite" peut n'être qu'un symptôme d'une malocclusion plus sérieuse.
- 2) On doit faire une différence entre des dents déplacées et des structures osseuses déplacées.
- 3) Le traitement d'orthodontie ne devrait être entrepris qu'après une étude approfondie des causes de la malocclusion.
- 4) Dans certains cas particuliers, on obtient de bons résultats en employant différents genres de couronnes munies d'extensions.
- 5) Une rétention artificielle doit être utilisée, si après le traitement, les dents remises en position normale ne se maintiennent pas en place naturellement.

ANNOUNCEMENT

The 1951 **MIDWINTER MEETING OF THE CHICAGO DENTAL SOCIETY** will be held at the Stevens Hotel, February 5-8.

MINNESOTA STATE DENTAL ASSOCIATION, Minneapolis, February 19-21.

EIGHTH PACIFIC COAST DENTAL CONFERENCE—Seattle, Washington, June 25-28, 1951.

One may sum up the present status of caries control by saying that while the beneficial effects of tooth brushing after meals, using any or no dentifrice, is beneficial, as recently shown by Fosdick and while the results of topical application of sodium fluoride and water supply fluoridation are encouraging, there exists at present no specific treatment against dental caries. With the beginning of the school year, it is the duty of the dentist as he treats his child patients, to inform parents of the known facts. Although home care, proper diet and other factors are helpful, the best insurance against tooth decay and tooth loss are early and periodic dental examination and care by the dentist.

J. A. Salzmann, N.Y. Jour. of D.

In England there is no incentive to bold undertakings. Today, it is safer to be a bureaucrat than a maker and the young men know it. Socialism is competition without prizes, boredom without hope, war without victory, and statistics without end. It is not politically false, but morally destructive.

Chas. Morgan, London Sunday Times.

OUR TEETH, VICTIMS OF THEIR ANCESTRY*

by JOHN STANLEY†, B.A., M.A., Ph.D., Montreal, Quebec

IT IS common knowledge today that our teeth are not standing up to the stresses imposed upon them by modern life. The dental profession is even more fully aware of this than is the general public, even though it is the public who have to suffer the pain. It is of importance therefore that both the dental profession and the public should understand something of the reasons why such dental failure occurs, and I hope in the following paper to be able to give some of these reasons.

When an instrument or a machine shows persistent failure in use, though apparently reasonably well designed, the trouble can always be traced to three causes: inadequacy of original design, insufficiently robust or wear-resisting materials, or faulty care and maintenance, combined with overload. Our teeth are today in precisely this situation, and all the causes of breakdown are operating.

It must be remembered that the Order *Primates*, to which Man belongs, is a comparatively unspecialised Order, in which physical excellence has been subordinated to the brain and its accessory organs, the sense organs and the hand. The other parts of the body tend to be relatively poorly developed and unspecialised, and there is a good deal of "making do" with relics of past designs. One has only to compare the perfect specialisation of the bird or fish with the anatomical hodge-podge that is Man, to see the truth of this. As a result of this fact, Man's teeth are still substantially those of prehistoric Man, and have not advanced with the times.

In terms of the original prehistoric Man, and his non-human ancestors, there was nothing wrong with either

design or materials in their dentition, and though we do find evidence of decay, and of traumatic occlusion in prehistoric skulls, neither occurred to the extent found today. Indeed, the situation could hardly have been otherwise in these early men, because their teeth came into being as a result of evolutionary forces generated by the life they led, and those who survived naturally had teeth suited to that way of life. The stresses of a changing way of life did not impinge upon the dentition of these men, because there was no change, and dentally speaking, all was well.

It is possible also that, combined with a more stable way of life, Man had greater plasticity and adaptability in those days, the race being young. With the rise of Modern Man, evolution is possibly less rapid, and this, combined with rapidly changing diet, mode of life and types of occupations, means that the imperceptible compensations of evolution lag far behind the demands made upon them. Thus, in the teeth of the Modern Man, design and materials are both inadequate, the support of the teeth cannot withstand the stresses of malocclusion, there is little or no power of self-repair, and dental breakdown supervenes.

In order to appreciate these things a little more clearly, let us glance briefly at the evolutionary history of design and materials in our teeth. This is a vast topic, and many studies of it have been made. Obviously, in a short paper one cannot do more than indicate the salient points.

Our teeth began their evolutionary career as hardened areas in the skin, homologous with the placoid scales found today in the skin of sharks, and

*Presented at the 26th Annual Fall Clinic of the Montreal Dental Club, October 19, 1950.

†Chairman, Department of Zoology, McGill University, Montreal.

in modified form as the teeth of sharks. Such scales were very common in pre-historic days. They had no bony support, but floated, as it were, in the skin. The scales are in the form of a blunt spike with expanded base, the latter buried in the skin (like a bridge lamp with its base set in mud). In the shark then, it is easy to effect replacement of worn or damaged teeth, by erecting successive rows of new teeth onto the dental ridge, and our primitive fish-like ancestors used the same method. Such teeth have an outer ectodermal enamel, produced by an enamel organ, and an inner core of dentine.

As grasping organs and to some extent, incisive tearing instruments, such teeth are quite adequate, but are useless for continued mastication by cutting, and quite incapable of any grinding effect, even if the articulation of the jaws in which they stand would permit such. The issues of wear and damage are dodged by the method of easy replacement, and it is at this point that the first mistake (if one can call it such) was made in the preliminary design of the structures which were later to become our teeth of today. Easy replacement means that the enamel can be steely hard, and non-self-repairing. When later, to accomplish mastication with cutting and grinding, rooted support became necessary, these characteristics of enamel posed a serious problem. But by this time the general tooth design was as it were "frozen", and had to be retained, even though it meant the sacrifice of any possibility of repair.

Had the first beginnings of tooth design been otherwise, springing perhaps from initially rooted structures, we would probably have had a self-repairing enamel. Some animals, more specialised than ourselves, such as the rat, have partly solved this problem by means of the continuously growing tooth, in which wear and self-sharpening at the tip is made up by new growth at the base, combined with steady eruption from the matrix.

There is however a grave danger here. Such teeth must be continuously worn down by friction against an antagonist tooth, or else continued growth will cause the tooth to pierce the skull, resulting in death to the possessor. Rodent skulls showing this phenomenon are not uncommon. With a growth rate equal to that in the rat, such a condition would arise in Man, with the loss of a tooth, in a comparatively few weeks. Obviously such a method of avoiding tooth wear is not for us.

With evolution of the skull and jaws, and with migration from sea to land, the teeth became rooted and acquired a mesodermal pulp, but they were still not much more than elongate conical pegs, open at the base (later somewhat closed), and were adapted for holding and tearing. They had self-repair by growth, and could in some cases be replaced from below. Such teeth are useless for cutting, as they have no occlusion. Those in the upper jaw merely interdigitate between those of the lower row, i.e., into the diastema. With the need for mastication and cutting, evolution brought into being the cusped tooth, combining this with a reduction in diastema, so that each upper tooth tended to *overlap* two antagonists. Thus, intense local pressure could be set up between opposing cusps, and masticatory cutting effected.

There are several theories as to the evolution of the modern cusped tooth, but the so-called "tri-tubercular" theory, seems to be the best substantiated. According to this theory, we begin with the conical peg-like tooth, or *protoconid*, to which are added later an anterior *paraconid* and a posterior *metaconid*, giving thus a three-pronged peg. This with a little smoothing off, becomes a three-cusped tooth. Posteriorly, this tooth had a plateau, the *talonid*, and on this plateau, further cusps were developed, leading eventually, by even-ing-off of the cusp size, to the human tooth of today. If, while this process is going on, the diastema be reduced as previously mentioned, and if, in the

upper teeth, the paraconid and metaconid move lingually, and in the lower teeth, move buccally, we have the familiar occlusal picture as seen in Man.

Now this high-cusped multi-cusped dentition is a cutting and holding device of excellent design, provided there is not too much lateral or rotatory motion of the lower jaw. Evolution, being without foresight, took no account of the fact that eventually Man would make such motions (due to changes in the articulation of the jaw). Thus, in Man, a dentition ideally adapted to mastication with simple opposed motion of the teeth is being compelled to cope with the stresses set up by cuspal interference occasioned by lateral and rotary motions used in grinding.

Parenthetically, such animals as the horse and elephant, who persisted in a fibrous vegetarian diet, set into play evolutionary forces which have taken their dentition far off the tri-tubercular track. This has given them ridged teeth, with no set pattern of cuspal occlusion. As a result, it is possible, as in the elephant, to effect tooth replacement by moving teeth *forward* in the jaw, as they are shed at the front. Thus, in old elephants, there are cheek teeth at the front and an empty diastema at the back, from which the back teeth have migrated forward. Such a method of replacement is impossible with cuspal occlusion, because the cusps fail to mesh once a tooth moves.

With cuspal occlusion, human dentition finds itself also on the horns of another dilemma. If the cusps persist, i.e., are not worn off, cuspal interference occurs, stressing the sockets as the cusps hammer against each other in grinding. If they do wear off, there is danger of caries in Modern Man, with his dirty mouth and acid saliva. The extent of the lateral stresses due to malocclusion are well appreciated by the wearer of dentures in which malocclusion is present. The hammering of the cusps shifts the dentures, and pain and discomfort occur.

In primitive races, who eat a fibrous, rough diet, and particularly in those races in which corn is ground in stone mortars, profound wear of the cusps occurs. The teeth may even be worn almost to the gum line, *but caries is rare*, and we must presume that either these people had an alkaline saliva, or that they had some natural immunity to caries. Certainly, such wear of the teeth in modern city-dwelling folk, on a sweet, high carbohydrate diet, can result in serious caries, though curiously enough, not in all cases.

Our modern diet usually does not wear the cusps, and hammering of the teeth is common. The obvious remedy is cautious grinding away of the tips of the cusps, avoiding too much thinning of the enamel in mouths in which caries seems extensive. It might be added at this point that, while orthodontia is often of great value in the correction of gross malocclusion, it is also often a cause of serious cuspal interference, where teeth are shifted for better cosmetic effect without regard to the possible resultant malocclusion. The orthodontist may sometimes have to decide between ugly teeth which work, even if not well, and pretty teeth which will commit occlusal suicide.

While all the above developments were going on, and Man was running himself into a dentitional cul-de-sac, changes were occurring in the support of the teeth. The tips of the roots became almost closed, and this made continuous growth impossible. Simple considerations of geometry will show that a tooth cannot grow continuously, without extensive and continuous resorption and rebuilding as it grows, unless the tooth everywhere tapers from base to tip. It is probably that this does actually occur at an almost infinitesimal rate even in Man, but the general thesis holds for any sort of appreciable growth. Thus, with the closing off of the tips of the roots, we have wiped out the possibility of any appreciable continuous eruption, the presence of cusps prevents forward

migration, and the smallness of the jaws in Man prevents storage of more than two sets of teeth. Thus, Modern Man has to make his teeth last all his life, and this, under present day conditions, they cannot do.

Returning for the moment to the stresses engendered by malocclusion. It must be remembered that bone (which forms the sockets of our teeth), is not an inert, but rather a plastic material. Under long continued mild stress, it adapts itself to that stress, and becomes better able to meet it. Under heavy and repeated stress, it yields and backs away. With lateral stress from malocclusion, the sockets of the teeth widen, and the teeth become loose, opening the way to periodontal infection. The dramatic tightening of a loose tooth in a young person with correction of mal-occlusion will be familiar to all dentists, but this does not work so well in older people, where bone growth is slower.

It must further be pointed out that Nature has never really solved the awkward problem of a tight seal between living and non-living materials, and exactly this problem arises where the gingiva meets the tooth. Failure to solve this problem is possibly the cause of the well known deepening of the gingival crevice with advancing age. This further contributes to the incidence of periodontal infection. While this seal is entire, the tooth is as a building set upon a rock (imbedded in a rock, for that matter). When the seal fails, the tooth becomes as a building built upon sand, and the results are a foregone conclusion.

The deepening of the gingival crevice exposed yet another weak point in the tooth, namely the cemento-enamel junction, most unfortunately set somewhat high on the neck of the tooth. Its unsatisfactory location arises from an interesting flaw in design, not remedied as it should have been in the very early days of prehistoric tooth production. When a tooth is formed, the enamel organ lays down a cup-shaped sheath of enamel with a thin lip (later

to form the cemento-enamel junction). With the tapering-in of the tooth to form the roots, the enamel organ ceases production. *It does not fold itself around the bases of the roots*, and lay enamel around these bases. Had it evolved to do so, the cemento-enamel junction would have been an irregular line deep down beneath the bases of the roots, so deep as to be immune to exposure by deepening of the gingival crevice. Furthermore, as stated, the enamel is laid down with a *thin* lip, and this results in a *thin* cemento-enamel junction. In what little things lie the seeds of our destruction! From these two flaws in design spring our numerous cases of caries of the neck of the tooth.

There is still a further flaw in the operation of the enamel organ, and it is this. The cusps are formed by local plaques of enamel forming tissue, and the resultant plaques of enamel tend to run together in the inter-cuspal valleys like two pools of stiff mud flowing together. As a result, enamel fissures are common in the bottoms of these valleys.

It was at one time thought that these fissures were a relatively recent development, but it is now known that they are quite as common in skulls many thousands of years old, but in these ancients, *they seldom lead to caries*. Once again we must assume that our ancestors either had a natural immunity to caries, or had a more alkaline saliva than we do. Today these fissures are a menace to dental integrity, and should be vigorously sought out and treated. They are a frequent source of rampant caries in adolescence, when calcium deficiencies combined with an increased intake of candy and soft drinks (containing sugar) may occur.

The above lamentable story being accepted for the sake of argument, what can the dental profession and the public do to offset these weaknesses in our dentition? Obviously the measures fall into two groups: better education of parents, and an alert attitude on the part of dentists. Parents should be

brought to see that teeth are not individual white objects in the mouth, each standing on its own merits, but rather that they are members of a community of organs. Damage or mis-alignment in one tooth means damage to all teeth, and every effort should be bent to the elimination of causes of mal-occlusion. Such causes are: mouth breathing, excessive thumb-sucking, persistent resting of the plastic skull on one hand while studying, premature removal of teeth without the insertion of bridges or other "spacers." Mal-occlusion and caries are themselves causes of further mal-occlusion as the child tends to use an asymmetrical bite to protect itself from discomfort.

The dental profession must adopt the same attitude, namely that of regarding the teeth as a community of structures, each dependent on all the others. It is necessary to do more than repair the ravages of caries. Good occlusion *must* be maintained. No one expects a set of gears to last very long if the teeth do not mesh, and the teeth are

like gears, with the cusps taking the place of the gear-teeth. It would be interesting to see if any use could be made of industrial "strain gauges," minute devices whereby strain and relative movement of machine parts can be detected. If a suitable technique could be worked out, it might be possible to make a stress analysis of a mouth, and detect danger points, correcting them where necessary. Orthodontia is of great value in many cases, *provided* attention is given to good occlusion in the final result, and cosmetic considerations are not given all the weight in the necessary operations. If the at present extremely high cost of orthodontia could by any means be brought down, so as to bring this technique within the financial orbit of the common man (who needs it most, for his children), it would be a very fine thing for the dental health of the next generation. After all, a sure-fire, but million dollar treatment for say, caries, would be of academic interest only.

Recent surveys have shown that there is at least ten times as much dental work waiting to be done as there are dentists available to do it. Only one tooth in ten can, therefore, receive attention. Our welfare minded citizens, without giving it too much thought, would like to nationalize the dental profession. They would solve this problem by a scheme which might go a long way towards bankrupting the nation. The scheme, of course, is purely a phony attempt to get funds and in the long run it will cost more than the nation can afford. To enlarge the dental schools and train ten times as many dentists as we now have would cost a tremendous sum of money. What is more important, in addition to the cost of building and supplying these schools, is the loss of 24,500,000 working years. We would be taking out of productive employment some 700,000 of our brightest young men. These politicians bent on socializing America forget that dentists, like doctors and nurses, never produce one penny's worth of real wealth. Theirs is a service profession. They are in fact a luxury which only a prosperous society can afford. Prevention must, therefore, be the answer to the problem of adequate dental care.

—Jonathon Forman in *Journal of the Ohio State Dental Association*.

The main objectives of the University are: (1) to assist in conserving and in transmitting the science and culture of the past; (2) to extend the frontiers of knowledge; (3) to educate successive generations; and 4) to act, through adult education and in other ways, as a cultural nerve-centre for its wide constituency."

Dr. Sidney Smith

Pres. Univ. of Toronto

THE CRISIS IN DENTISTRY*

by ROBERT E. MOYERS†, M.S., D.D.S., Ph. D., Toronto, Ontario.

PROBABLY no subject, with the exception of possible war and communism, occupies a greater portion of our newspapers and magazines at this time than that of socialized health care schemes. The current experiment in government controlled medicine and dentistry in Great Britain has precipitated much of this interest in a subject which ordinarily goes unnoticed. The newspapers are filled with editorial about better health service to all levels of society. In the United States the Federal Security Administrator speaks of the big business monopoly in medicine and offers as a substitute compulsory health insurance. In retaliation the American Medical Association paints frightening pictures of "socialized medicine" and the family physician supplanted by a Washington bureaucrat. No visitor to England has returned to these shores for five minutes without adding his comments on the medical situation there. With all of this uproar, it is difficult to view the situation with clarity of mind and purpose, and for those of us so vitally affected by the ultimate outcome, it is nigh impossible to discuss the matter free of prejudice and emotion. So much has been written and spoken that it now seems unlikely that any kind of progress will be made towards the common goal of more efficient health service until the air has been cleared. But in spite of the barrage of charges and counter-charges, accusations and denials, there is one very important phase of the dental aspects of this question that has gone unnoticed. It is to this point that I wish to speak at this time.

The late Dr. Thomas Cowling told the story of two boys in swimming.

Neither was a very good swimmer, but one was attempting to coach the other. "There is just one important rule," he said, "when you get in over your head, don't open your mouth." Perhaps anyone today is in over his head when he attempts to discuss the intricate problem of improving the health service to the population as a whole. The government's absorption in the matter may be passed off by some as bureaucratic meddling, the politician's alarm as a regard for votes, and the reporter's editorials as a chance to wave the white banners of a crusade of concern to all the people. However, the consistent clamour on the part of the man in the street is not to be denied. John Q. Public is interested in health services today as never before in history. This is a fine thing, because the more excited and enlightened he becomes, the less likely is government to be stampeded into some harum-scarum idealistic bureaucratic red tape mess. All of us are agreed that some way must be found to bring to the people adequate health service at a price all can afford and at the same time guarantee to the practitioner a just recompense and the right to conduct his affairs with the same freedom enjoyed by the butcher, the baker, and the candlestick maker. Many of us are agreed too, in the hope that some better method of reaching this goal may be achieved in Canada and the United States than that being tried in Great Britain. But from this point on I must part the ways with many of my dental confreres, for *I believe that the better way of achieving our future is to take positive action rather than engaging in a fight to defend our record.* The real crisis in dentistry is not the attempt by

*A revision of a paper given before the 8th District Dental Society of New York in Buffalo, February, 1950.

†Professor and Head of the Department of Orthodontics, Faculty of Dentistry, University of Toronto.

others to run the profession, but rather our own inability to adjust ourselves to the times in which we live. The emergency is not so much one of economics as it is of attitude. As long as dentistry will keep step with the times, we have nothing to fear. But you and I know in our heart of hearts that in many ways we have not kept up. In some phases of our profession we are as modern and up-to-date as any branch of scientific endeavour. This is true of our techniques, dental metallurgy, and plastics: but is it also true of our dental teaching methods, dental economics, and the social awareness of the profession?

PRESENT AND PAST ATTITUDES

Let us for a moment examine some of our present and past attitudes and see from whence they came. Many of us opposing any change in the present system of practice do so because we understand its merits, and fear that which is unknown to us. This is not to be regarded as an effort to preserve the "good old days," but rather our desire to avoid trading something tried and proven for an idea whose chief merit seems to be that it is new and different. We are agreed on the goal, but there are other ways of achieving it than governmental regimentation, and we must develop these methods. In a letter to me, a friend in the United States Senate, Wayne Morse of Oregon, once wrote, "I am not in favour of socialized medicine, but I agree with many of my medical friends—among whom are to be found many political conservatives—who recognize that the medical profession itself is going to have to come forward with a program which will protect private medicine and which, at the same time, will make available to the rank and file people of the country adequate medical service at reasonable fees.

"I think the handwriting is as clear on the wall as anything can be. I want to see the medical profession prepare such a program and I can be counted upon to co-operate with it, doing every-

thing I can to put such a program across. At the same time I think it is important that the medical profession stop devoting so much of its public relations energy to its opposition to socialized medicine and do more toward giving us a program that is a complete answer to those who are seeking to drive the country into a program of socialized medicine. In other words, I think it is perfectly clear that it is only a matter of time before an adequate health program will have to be adopted, but I believe that it must be done without socializing the practice of medicine in this country." I believe with my friend that we must cease this blind fighting of socialized medicine and devote our energies to promoting and perfecting an alternative answer to the problem.

Since its inception as a profession dentistry has stood apart from medicine on this continent in the regulation of its practice and in the education of its future practitioners. Yet we in the United States have let ourselves be subjected to the most caustic of criticisms because we have not developed a separate attitude towards this matter of state medicine. The medical profession is larger, and its spokesmen have been more vociferous than any in dentistry. They have a reason to be more frightened; they are in a more vulnerable position, simply because the medical manpower is available now to implement a government health program. There are 80,000 dentists in the United States, or one for each 1,875 people. There are almost two and one half times as many physicians or one physician for approximately each 730 people. Inasmuch as the physician can care for the needs of approximately three times as many people as the dentist, this means that in the United States the medical manpower situation is in nearly seven times better shape than that of our profession. There are not enough dentists at this time to carry out the grandiose government schemes proposed by many, nor are there dental schools available for the training

believe precious and yet meet the public clamour for more efficient service. There is another way, and it can be carried out under the framework of our present system of practice economics with but minor changes. It will however, necessitate radical departures in dental school curricula and in the attitude of the practitioner. What alternative do we have to this crisis in dentistry? We have the alternative of changing our hide-bound attitudes towards our work and putting to use the knowledge that is already available; knowledge which will enable us to render better service to more people at reasonable fees and with a fair return. I speak of practising preventive dentistry.

PREVENTIVE DENTISTRY

A surgeon on the staff of a hospital with which I was formerly associated told me that since the advent of the sulphonamides and penicillin the number of mastoidectomies per year had dropped from over 700 to less than 2. Thus this newer knowledge greatly altered the routine and training procedures in his department. Just as dramatic work has been going on in dentistry, but we have failed to make it part and parcel of our training in the schools and have avoided adopting it into our practices. Periodontal disease accounts for more than half of all tooth losses: are we to believe that this figure is high and due entirely to patient neglect or are there dentists who fail to take the time for adequate periodontal treatments and dietary advice? The newer methods of caries control have been shown to be capable of producing a 30% reduction in the incidence of caries in children. Do we explain and sell these procedures to each and every patient who enters our doors or do we often shrug our shoulders and say, "Oh, it's just another of those fads." More than 60% of all malocclusions can be prevented, but the average practitioner says piously, "Orthodontics—oh, I leave that to the specialist," or "Just leave Johnnie's

teeth alone until he's 13 or 14 and we will send him to an orthodontist." The knowledge to prevent and control a large proportion of the three commonest dental diseases is available now, today. How much longer will we wait to teach it in our schools, and when will it become an integral part of our practices?

Little was known in early days about the preventive aspects of any branch of medicine. Public health and preventive medicine were not even dreams in men's minds and the physician spent the major portion of his time in surgery, internal medicine and obstetrics. The highly specialized divisions of medicine did not come for many years, but as more was learned about the nature of disease it occurred to thinking men that perhaps the most efficient way to handle some situations was to prevent them before they started. Thus was born a Jenner and a Gorgas and men came to talk of immunization and sanitation. Dentistry originated and developed primarily as a prosthetic service. The founding fathers of the profession no more visualized present-day specialties of orthodontics and paedodontics than the early medical leaders understood the possibilities of paediatrics and immunology. Their concepts of dentistry have held until the present time in spite of the rapid strides that have been made in prevention. For proof of this attitude one has only to look at the curriculum survey of North American dental colleges done by the American Association of Dental Schools. This showed that in the average dental school on this continent more than ten times as many hours are spent on the mechanical aspects of dentistry as on the subjects which might be considered preventive in nature. Let us take orthodontics for an example. The average dental school spends 4% of the total clock hours on this important subject, almost as much time as is spent polishing dentures. We all send our dentures to the commercial laboratory to be processed and finished but every

of greatly increased numbers of students. These figures are not given to lull us into complacency, but rather to point the way to other possible solutions to the problem. This fact is not fully appreciated by many advocating the immediate adoption of a socialized health service scheme, and therefore becomes our peculiar property and responsibility.

MEDICINE IN GREAT BRITAIN

Few of us who raise the cry against state medicine have even bothered to study it in action in Great Britain, or, what is more important, acquaint ourselves with the intricacies of the various schemes proposed here. In its simplest form, socialized medicine is where thirty kind relatives and thoughtful friends pitch in with a cure apiece for your cold. In Great Britain it is the government's attempt to reorganize the medical and dental professions in order that their services might be more equitably distributed to all strata of the population. Some say this would never have come about had our colleagues across the water kept pace with the ever-present changes in society. I do not concur, but nonetheless Britain today is beset with conditions which led to the writing of the following poem:

O, to be in England
Now that health is free!
Not a farthing needed
For an appendectomy!
Dentists for the asking,
For husband, child, or spouse:
O, to be in England
Now that health is on the house.

O, to be in England
Where the pills are running free!
Help yourself to wooden legs—
Ne'er a penny fee.
This paternal caring
For the ailing and the sick—
Will it be a cure-all
For the body politic?

During the recent war it was my privilege to have served with a group

of British physicians. The past several years following the cessation of hostilities we have maintained correspondence and the letters received from these men give a clear impression of what has and is happening in Great Britain. Their writings contain little about medicine the science, but much about medicine the government bureau, the disappointment, the disillusionment, the anguish of being forced to lower one of the noblest of all callings to the level of a public utility. Every single man has said at one time or another that he longs for the days when we were with the Greek guerrillas. These were times of trial and terror, or starvation, of horror and of danger. Yet they sometimes long for those days simply because then they thought they had a more purposeful life of service: now they are numbers. A physician in one English town is said to have put a shingle above his door with the caption Dr. 1629, this being the number assigned him by the government.

The thing we dislike most in many of these suggested schemes of health care is the loss of the personal relationship with the patient. Governmental directives are a sorry substitute for tenderness and understanding. Doctor Edward Erdei wrote recently in the British Medical Journal that the Ministry of Health is refusing free spectacles to all persons whose pupils are more than 2.8 inches apart. He said, "Wider set eyes are not accepted by the Ministry as probably not conforming with the specifications of the human race as laid down by one of its committees."

This is the thing we fight and we understand the dangers inherent within any system of government controlled medicine. But this is not enough. Mr. Public is dissatisfied with our present plan of rendering service, and rightly or wrongly thinks it can be improved. We cannot blame him if he goes for the only substitute thus far advanced. It is our duty to propose a plan which will protect those things we

hour that goes by sees an orthodontic problem in most dental offices. This past year another curriculum survey was carried out by the American Association of Dental Schools. It investigated orthodontic teaching specifically and revealed that many of our dental schools offer no training whatsoever in clinical orthodontics. Is or is not orthodontics a branch of dentistry? This latter study further revealed that almost without exception more time was spent in teaching the student to fashion molar bands than in teaching him preventive orthodontics. Any good tinsmith can learn to make a decent band in a couple of hours, and they can be purchased ready-made if you desire. However, nothing will prevent malocclusion except the highest type of carefully-timed prophylactic therapy. In the case of orthodontics, the solution lies not in the training of a vast army of specialists, but rather in producing general practitioners who think in terms of prevention and practice prophylactic as well as restorative dentistry.

The same thing is true for dentistry as a whole. I submit that one of the ways to meet the increasing clamour for more and better dental service is by lessening the need for treatment. This can only be done by spending a fair portion of the time in our schools and in our practices on preventive and children's dentistry. How much time do you spend?

For many years dentistry has had before it two alternative paths to the future; one, that of a true profession rendering the highest type of service to the public, the other, that of a trade; the trade of fashioning artificial teeth to replace lost natural ones. We cannot and must not shirk our restorative and prosthetic responsibilities, but we must decide now, for once and for all: are we to practice as middle men for the commercial dental laboratories, or are we to develop dentistry to the fullest of its potentialities as a profession? Let no one mistake these remarks as a criticism of prosthodontics or pros-

thodontists. I am simply asking the question, when will we develop the other branches of dentistry to the level prosthetics has already attained? Further, is it not necessary to bring the preventive side of dentistry into sharper focus at this time to meet the challenges of those who would steal our very profession and give it an alphabetical title and a governmental address? There are those who say, "I'll practice as I please no matter what they say." I, too, regard myself as an individualist, more or less rugged. But changes will come and it seems more prudent of us to try and direct them carefully than fight them blindly. It is one thing to say that communism is evil and wicked, it is another to understand that it does indeed have an appeal to the person who has nothing to lose and much to gain. We will never whip communism until the democracies offer concrete realistic chances for a decent existence for all the peoples of the world. Only this will supplant the rosy promises of the Kremlin in the minds of the hungry, the oppressed, the downtrodden. In like manner, it is all right for us to say that state medicine is worthless, but we will not solve the problem to anyone's satisfaction, unless we have a cold, hard, realistic substitute plan.

CHILDREN'S SIDE OF THE PROBLEM

But what have we thus far suggested? Nearly every plan thus far brought forth has played up the prosthetic aspects of practice and paid little attention to the preventive and children's side to the problem. For many years New Zealand has given over the care of children's teeth to the dental nurse while the dentist makes dentures. It is the nurse who now has the most challenging task of all and it was given up by the dental profession in order that the dentist could keep right on making plates. There is a manpower shortage in dentistry and some ancillary services may have to be brought into the profession. But it will be a sorry day for dentistry when we

as a group relegate the noblest of our responsibilities to a nurse. If we must give over any part of our job let it be that of the laboratory work to the trained laboratory technician. I for one want to see dentists still responsible for the work on the human body. Must we always relegate children's dentistry to a secondary consideration?

Of all the professions dentistry occupies one very unique distinction. It is in a position, today, to work for the abolition of itself. The highest goal dentistry can set for itself is that some day in the far off future there will be little need for the services now being rendered by our profession. This is not just an idle pipe dream and will not occur in your life nor mine, but our present knowledge has progressed to the extent where we can say with some certainty that it will occur in the foreseeable future. True, traumatic injuries to the teeth will always beset mankind and Junior will be born with mother's small facial structures and father's big teeth. But who can say that the enigmas of dental caries and periodontal disease are beyond solving? Until that millennial day we must, to be sure, continue to make prosthetic and restorative replacements in the mouth. But it is also our duty to never lose sight of the ultimate goal of dentistry. To do so is to betray the founders of the profession and to apostatize the word doctor.

RAISE THE SIGHTS

It should be apparent to many of us by now that we have no choice but to raise the sights of our profession or have it reduced to the minor role of a trade. The actual practice of modern principles of preventive dentistry by every dentist would enable us to take care of many times the number of patients now being handled. It would reduce the ultimate number of restorations necessary. It would mean a saving to each family in the total amount expended on dental services over the period of years and it would not necessarily lower the income of the dentist

since he would be seeing many more patients.

RESPONSIBILITY OF OUR COLLEGES

Why are we not practising preventive dentistry today? I am afraid that the blame falls directly on the shoulders of those of us engaged in teaching. Dentistry can rise no higher than its source. Until we in the dental colleges think preventive dentistry important enough to give it a major portion of the student's time we cannot criticize the practitioner who does not put it into daily use. For after all he got his training from us: he does what he was taught to do. The strange thing is that instead of the schools leading the profession, oftentimes it is the reverse that is true. This past year the largest enrolment for continuation courses at the University of Toronto has been for the courses in periodontics, paedodontics, radiodontics, and orthodontics. Surely this is indicative of an awakening awareness in the preventive side of dentistry. This desire on the part of the practising dentist to fill the void in his education is indeed commendable, but I see little hope for the real practice of preventive dentistry until the leaders of the various dental societies and the teachers in our dental colleges make a more strenuous effort to supply this demand for more knowledge about preventive dentistry.

CONCLUSIONS

There is indeed a crisis facing dentistry: we are at the proverbial crossroads. But pay no heed to those who say that our future is to be determined by a legislative vote. The problem is not one of legislation at this time, it is rather one of attitude; your attitude and mine. State medicine may be destined for us, but there is still time to prove to the man in the street that dentistry is ready, willing and able to meet his demands for better service without sacrificing our time-honoured principles of practice. The obvious answer is the day by day application of the newer knowledge of preventive dentistry.

try. We need not resign ourselves to a government-regulated profession replete with red tape, price-supported amalgams, and forms in quadruplicate. But dentistry's future will be determined by those outside of the profession, unless we take the ball and carry it at this time like it has never been carried before. Let us itemize the things we must do to provide dentistry's answer to state medicine:

(1) We must insist that dental schools allot a large share of the student's training time to preventive dentistry.

(2) We must make certain that the program committees of our various societies secure the very best talent available in order that we may keep up with the latest knowledge in the field of prophylactic dentistry.

(3) We must put into practice in our individual offices the principles of pre-

vention. Further, we must all take time to explain to each and every patient why we are doing so. The public is being swamped with propaganda about state medicine. He is at least entitled to hear our side of the matter.

Dentistry will move forward when we want it to: it will move forward where we want it to, or else it will perish as an independent profession. The crisis that faces us today is whether we will change our attitudes enough to retain control of our profession or will our indifference and negligence cause the public to lose one of its most precious heritages. The best answer to more efficient dental service lies not in some costly governmental scheme, but rather in your office and mine. What dentistry will be in the future is dependent upon what we are determined it shall be! That is the crisis: that is the challenge. What is our answer?

Résumé

Présentement, la dentisterie souffre d'une crise: nous sommes rendus à une croisée de chemins. Ce problème n'est pas une question qui regarde la législation; il s'agit d'une attitude à prendre, vous et moi. L'assurance-santé nous englobera peut-être; mais il est encore temps de montrer à l'homme de la rue que la dentisterie est prête et capable de remplir ses exigences pour un meilleur service sans fouler aux pieds les grands principes qui ont jusqu'ici guidé notre pratique. L'unique réponse réside dans l'application, tous les jours, des données nouvelles de dentisterie préventive. Enumérons les positions que vous devons prendre pour formuler la réponse de la profession dentaire aux propositions de l'assurance-santé:

(1) Insister pour que les facultés dentaires donnent une place de plus en plus prépondérante à l'enseignement de la dentisterie préventive.

(2) Demander aux dirigeants de nos sociétés qu'ils nous procurent l'avantage d'entendre des meilleurs conférenciers et cliniciens possibles traiter des plus récents progrès de la prophylaxie dentaire.

(3) Inculquer dans notre pratique individuelle toutes les notions préventives possibles. Nous devons prendre le temps d'expliquer à chaque patient les raisons de notre conduite. Le public est inondé de littérature traitant de médecine d'Etat! Il doit être renseigné aussi sur notre conception de cette question.

Stevenson speaks of the "great task of happiness." But happiness is not a task. It is not even an occupation. It is a quality of life. Happiness depends on helpfulness. That's the reason joy is social. Helpfulness keeps happiness because it adds to the area of affection. People are not happy when they seek after happiness. They become steeped in happiness when they undertake to promote the joy of others.—W. Virginia D. Jour.

*A little Kingdom I possess where thoughts and feelings dwell,
And very hard the task I find of governing it well.—Alcott*

PRACTICABLE PREVENTION*

by DR. ALAN L. YOUNGER, Ottawa, Canada.

IN recent years, dentistry's approach to dental care has changed. From being a profession centred on restoration, it has now shifted its emphasis to prevention. Much has been written and much research work has been done in this new field, but, too often, it seems as if the work is very theoretical or too complicated to adopt in private practice.

It is our purpose, not to present anything original, but merely to attempt to use information that has been gathered by others in setting down a practicable method which the general practitioner may use to render a better service to his patients.

The average patient is not particularly interested in a too-restrictive plan for his dental health. As a usual thing, he is willing to cooperate with his dentist in an easy protective method. Such a method will include the following care:

I. In the office

- (1) Bite-wing radiographic survey once a year
- (2) Recall appointments every four months for prophylaxis
- (3) Sodium fluoride application for children

II. In the home

- (1) Toothbrushing technique improved, plus brushing after meals
- (2) Removal of foods containing excess carbohydrate from the diet.

In connection with this technique, the following comments may be made on the steps:

(1) The value of regular radiographic surveys cannot be overestimated. The smaller the cavity, the easier it is to do. Much serious trouble can be avoided by frequent x-ray examination.

(2) By examining the mouth every

four months, the operator can easily pick up the developments since the last examination before they have a chance to progress very far. Further, prophylaxis by the dentist will tend to polish any roughened surfaces or margins on restorations and thus help to prevent decay.¹

(3) No great amount of time need be spent in discussing the sodium fluoride treatment. In brief, its application as suggested by the U.S. Public Health Service is this:

1. Cleanse the teeth.
2. Isolate with cotton rolls.
3. Dry with compressed air.
4. Wet crown surfaces with sodium fluoride 2%.
5. Allow to dry approximately three minutes.
6. Apply 4 times, two days to a week apart.

This no doubt, is a technique familiar to all.

(4) Most patients spend little time or effort in cleaning their teeth. The periodontists have given us excellent toothbrushing techniques, but these are a little hard for our children patients to master. If we can teach the child a wiping motion with the brush instead of a sweeping one, he will have better success. A good trick is to cover the brush with a small square of cloth and then vibrate the brush down the tooth surface. Fosdick has shown that the incidence of caries can be greatly reduced by brushing the teeth immediately after eating. This is not always practicable, but certainly they can be brushed after regular meals.

(5) The cooperative patient is often willing to honestly record his diet for a period of one week. This can be roughly analyzed by the dentist, who can make suggestions to the patient in improving his diet. This usually will entail the substitution of more fresh

*Presented as a table demonstration at the Eastern Ontario Dental Association Convention, September, 1950.

fruit and vegetables for some of the excess carbohydrate-containing foods so prevalent in the diet today. (A very helpful booklet in this regard is "Normal Nutrition" compiled by the Department of Preventive Dentistry, University of Toronto.)

In connection with diet, we have heard so much about the high sugar content of soft drinks, did you know that they have a pH of approximately 2—more acid than vinegar?

For the extra-susceptible patient who is desirous of helping his condition, the best method is that of dietary control. This is no new field, having been worked on notably by Dr. Jay of Ann Arbor. An easily followed technique is that proposed by Dr. Jay which consists of the following:

1. Saliva test to determine lactobacillus count.
2. Carbohydrate-free temporary diet.
3. Second bacterial count.
4. Addition to the diet of whole wheat bread, increase of fruits and vegetables, being sure none have been prepared with sugar.
5. After two weeks, if the count has not increased, add sugar at one meal. If the count has not risen after two weeks, the diet can be unrestricted.

A few comments might be in order with regard to this treatment.

(1) Saliva tests will be done for the dentist by the Department of Health of the Province of Ontario. Apply to your nearest Provincial Laboratory.

If the count is over 10,000 per cc. the patient is susceptible.

(2) The research of Dr. Jay on this subject has been very practically summarized by the Department of Preventive Dentistry of the University of Toronto in a booklet published by the University of Toronto Press. This book provided an easy method for the dentist to bring prevention within the reach of his patients.

The foregoing suggestions have proved successful in our practice, and it is hoped will be of some value in helping the dentist who is earnestly trying to do his part in the new "preventive attitude." It is a grand thing to be able, not only to preach prevention, but to practise it.

REFERENCES:

1. Easlick Dental Caries.
2. Normal Nutrition—U. of T.
3. Caries Prevention Service—U. of T.

391 Richmond Road

EDITOR'S NOTE:—The Faculty of Dentistry, University of Toronto, have a service appraising diets and making recommendations to the dentist. Those interested should enquire by writing to the college.

Résumé

En général, le patient se prête volontiers à des moyens faciles de prévention dentaire. Un plan simple comporte les obligations suivantes:

1. Au cabinet:

- 1) Relevé radiologique à l'aide de films "bite-wing," une fois par année.
- 2) Prophylaxie tous les 4 mois, au rappel du dentiste.
- 3) Application de fluorure sur les dents des enfants.

2. A la maison:

- 1) Technique améliorée de brossage des dents et brossage après chaque repas.
- 2) Abstention raisonnable, de la diète, d'aliments contenant beaucoup d'hydrates de carbone.

Le patient prédisposé à la carie, qui veut réellement s'aider, devra attacher beaucoup d'importance à son alimentation. Ces théories ne sont pas nouvelles; elles ont été exposées en détail par le Dr Jay, de Ann Arbor. Une marche à suivre, simple, proposée par le Dr Jay est la suivante:

- 1) Décompte des lactobacilles de la salive.
- 2) Diète, pour un temps, dénuée d'hydrates de carbone.
- 3) Second décompte.
- 4) Supplément à la diète, de pain brun, de légumes et de fruits, en s'assurant que ces légumes n'ont pas été préparés avec du sucre.
- 5) Après deux semaines, si le nombre des lactobacilles n'a pas augmenté, ajouter du sucre à un repas. Si le nombre n'a pas augmenté après deux autres semaines, la diète est relâchée.

The Forum

THE ROLE OF AMMONIA IN CRIES CONTROL

by ROBERT G. KESEL, D.D.S., Chicago, Ill.

Condensed from N.Y. State D. Jour., Oct., 1950.

A project was started on 1,700 school children of the same age, who were divided into four groups; two using ammoniated dentifrices, and two dentifrices without the ammonia. These pupils were taught to brush uniformly and conducted their brushing at their school desks under the supervision of their room teachers twice each school day.

The project began two years ago and was completed in May of this year. The "before and after" dental examinations of these 1,700 children are now being appraised by the Illinois State Health Department and a report will be available in about six weeks on the effectiveness of the ammoniated dentifrices used under these conditions.

The claims that have been made for ammoniated dentifrices, in my opinion, have been premature. Sufficient clinical evidence through controlled studies is not yet available to make unqualified claims. I fear the public is being led

to believe that a panacea for the control of tooth decay is at hand. We have reason to believe that our clinical evidence will indicate that the use of ammonia in a dentifrice will be helpful in a modest reduction in decay. But decay will still occur, and individuals must continue to seek the services of their dentists to care for the cavities that will develop before serious damage is done. They should not develop a sense of false security and think that by exposing their teeth once or twice a day to a dentifrice containing ammonia, they will have no more dental decay.

Also, there are individuals who are allergic to the ingredients used in ammoniated dentifrices. When definite allergy is demonstrated, of course, these individuals should not use an ammoniated dentifrice.

Complete protection against tooth decay cannot be purchased in tubes, cans or bottles.

PROFESSIONAL PECKSNIFFS

Hoarhound Tea keeps a saint out of Heaven upwards of 24 years.

Submitted by H. A. HUNTER, D.D.S., Faculty of Dentistry, Univ. of Toronto,
from recent bibliographical searches.

"In the summer of 1800, I was asked if I wished to see a triumphant saint expire. 'Much more,' I replied, 'than to see Rome in all her pristine or present glory.' I was accordingly directed to call on Mrs. W—, of the Surrey Road, which I did, in whom I beheld the nearest approach to an animated skeleton I ever expect to see. She instantly recognized me (having often met me at the sanctuary), and shook hands

feebly. She was on the mount of God's unchanging love."

Mr. Sutcliffe had the cruelty to administer hoarhound tea, which prevented the saint from "going home." When informed she was out of danger, she shed tears of grief. She shortly afterwards retired to Warwickshire instead of Paradise and grew quite lusty.

REFERENCE:

Sutcliffe, E.: Medical and Surgical Cases; selected during a practice of 38 years, London, 1824, 8vo., pp. 628.

SODIUM FLUORIDE DENTAL CARIES PROPHYLAXIS

by DAVID B. AST, D.D.S., M.P.H., Albany, New York.

Summary of paper in N.Y. State D. Jour., Oct., 1950.

1. The evidence concerning the limited caries prophylactic effect of topically applied sodium fluoride has been well substantiated.

2. Four applications of a 2 per cent aqueous solution of sodium fluoride, made at intervals of 2-7 days following an initial tooth cleaning will effect a decrease of approximately 40 per cent in DMF permanent teeth and DF surfaces among children 7-15 years of age.

3. In the deciduous teeth of 2-7 year old children, the decrease in DF surfaces is approximately 22 per cent. The best results were obtained in the 2-3 year old children with a decrease of 46 per cent in DF surfaces and apparently no benefits are noted in the deciduous teeth of children treated at ages 6-7. However, at ages 6-7, new permanent teeth are beginning to erupt which should be treated as early as possible.

4. There is some evidence to date that topically applied sodium fluoride has limited protective benefits against dental caries among adults, as well as among children.

5. After three years of water fluoridation in Newburgh, the DMF rate for permanent teeth shows a consistent downward trend from 21.0 to 14.8 per 100 permanent teeth. This indicates a saving of 6.5 permanent teeth per 100 in Newburgh as compared with a rate of 21.3 per 100 in Kingston at the last examination. This represents a saving of 30 per cent.

6. Among first molars which account for the major part of the caries problem in children, after three years of water fluoride experience, Newburgh's rate was 48.0 DMF per 100 first molars, while Kingston's was 58.7, or a difference of 10.7 DMF per 100 first molars. This represents a saving of 18 per cent in DMF first molars.

7. Some of the differences between Newburgh and Kingston as represented in these data occurred subsequent

to enamel calcification and subsequent to eruption of the first molars.

8. We cannot entirely rule out the possibility of variation in the interpretations of the examiners. The fact that more than one examiner was used might alter the differences between Newburgh and Kingston to some extent. However, the consistency of the differences in the DMF rates of the two cities is such that it is unlikely that an examiner bias could vitiate them.

9. These data are preliminary and it will be necessary to continue collecting data for the proposed duration of the study, that is, through 1954 to 1956 to obtain additional information concerning the caries prophylactic value of fluorine.

10. The evidence to date in the Newburgh-Kingston study is very encouraging. Accordingly, the New York State Department of Health has recently issued a statement of policy concerning the application of this technique in other areas of New York State, to wit: "If communities, after consultation with their local medical and dental societies, wish to establish this procedure, and where the communal water supply will lend itself to fluoridation and is under the direct supervision of a qualified engineer, the New York State Department of Health will make available its consultant staff in helping to plan the program and establish standards and procedures."

11. Despite the positive findings with regard to topically applied sodium fluoride and the encouraging trend noted in the Newburgh-Kingston caries fluorine study, it is to be emphasized that no method yet devised promises to prevent all dental caries. Early and periodic dental care as well as good nutrition and mouth hygiene remain essential requisites for maintaining dental health.

SOME PSYCHOLOGICAL ASPECTS OF DENTISTRY

by WILLIAM T. HERON, Professor of Psychology, University of Minnesota.

Condensed from Minneapolis Dist. D. Jour., Sept., 1950.

Dentists have made many remarkable advances in the art and science of their profession. This progress is meritorious, indeed, but there is an important consideration in dentistry which has not received as much attention as it deserves. This is the psychological aspect.

The most powerful tool the dentist has for the control of behaviour is suggestion. This fact brings us then to the discussion of hypnosis, since the outstanding characteristic of the hypnotic state is the increased suggestibility of the subject. Hypnosis in dentistry has its disadvantages as well as its advantages.

The principal advantages may be listed as follows:

1. With the use of hypnosis it is much easier to evoke relaxation in the patient; it will be easier for him to sit quietly in the chair, his facial muscles relaxed.

2. When the patient is in the hypnotic state, speech is slowed down or completely absent, thereby eliminating useless conversation.

3. The patient's apprehension and fear regarding the dental work may be greatly alleviated.

4. Anaesthesia of the teeth and gums can be produced by suggestion.

5. Post-hypnotic suggestion (a suggestion which is given in the hypnotic state, but carried out by the patient in the non-hypnotic state) can be given the patient to help both him and the dentist in further work.

Some of the difficulties or disadvantages that may face the dentist in applying the hypnotic technique in his work are as follows:

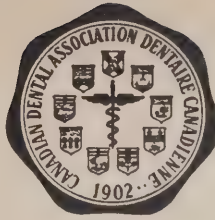
1. Some individuals can not, or will not, be induced into the hypnotic state. Available data shows that approximately 97% of the normal adult population in America can, to some degree, be induced into the hypnotic state if the person is willing to cooperate. It

is very difficult, and often impossible, to hypnotize certain groups of people. These are (a) children before the age of 6 or 7, (b) feeble-minded persons, and (c) persons who are psychotic or insane. The more intelligent the normal adult is, the easier to hypnotize, other factors being equal. Then too, the dentist must use his discretion and good judgment in deciding which patients can most benefit from hypnosis. Some will not need it; others will desire it because they dislike novocaine or the needle; and still others will benefit from it because they remain tense and uncomfortable in the dentist's chair even with novocaine.

2. The time required for hypnosis varies from one person to another. Also there is a prestige factor involved. If the patient has confidence in the dentist, it will be much easier for the patient to be hypnotized. The time element, of course, is very important and cannot be disregarded. The dentist has just so much time that he feels he can spend with the patient in inducing hypnosis. I believe that about 85% of the patients can be hypnotized sufficiently for dental purposes in not more than ten minutes. If the proper post-hypnotic suggestion is given, the time spent on future inductions will be greatly reduced.

3. Occasionally a patient may not accept or follow a suggestion offered by the dentist. The reason for failure is not always apparent, and it is rather disconcerting when it happens. However, the suggestions usually given in dental hypnosis are such that the patient is usually motivated to accept them.

4. Until the American public becomes more familiar with the possibilities of hypnosis and the benefits which can be derived from its proper application, the pioneers in this field must expect repudiation from some of them, even some of their own profession.



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Editorial

PREPAYMENT PLANS FOR DENTAL SERVICES

by **DON W. GULLETT, D.D.S., Toronto, Ontario**

Evidence is not lacking that a change is contemplated in the economic methods of furnishing health services for the public. The rising cost of health services, the increasing demand for services and the general change in socioeconomic conditions have given rise to many experimental systems.

Pre-payment hospital and medical plans have developed to a position where a large proportion of the population in United States and Canada is either partially or fully covered against hospital and medical costs. These voluntary health plans have been developed mainly by two agencies: firstly, by private insurance companies and secondly, through the active support of organized medicine. Undoubtedly the energetic support of organized medicine in the establishment of such voluntary plans is to avoid, if possible, the institution of compulsory health insurance through legislation. The general idea behind voluntary plans is to offer as large coverage of services as possible to include as many of the population as possible. The expansion of these plans has been rapid. Gradually the coverage has been increased until it is now possible to secure complete coverage for hospital and medical expenses.

The thought is that voluntary plans will eventually include practically everyone who has ability to pay. With the administrative machinery in motion it is hoped that governments may see fit to simply pay into the existing organizations for those who cannot pay thus covering the whole population. It remains to be seen whether or not this will work out as

planned. The history of the health insurance movement in practically all countries has been that voluntary plans eventually become compulsory plans. However, one fear of governments is the high cost of administration whenever governments have attempted to operate health plans. The real possibility does exist that if satisfactory voluntary health plans can be established with comparatively low administrative costs, the whole scheme, if established, may remain under complete or semi-complete professional control.

Up to the present dentistry has made extremely little effort towards establishing voluntary plans. One or two dental plans of a partial nature are in operation in the United States. The C.D.A. Committee on Health Insurance Studies has given study to this subject for some time and produced a model plan which is contained in the 1950 Transactions which will be distributed in the near future. This plan is not considered to be perfect by any means and needs to be studied carefully.

From the dentists' stand-point, one major hindering factor in the adoption of a voluntary plan is fear of its outcome. The average dentist reasons how can a definite rate be set when there is so much variation in the patients' need and type of service which can be rendered. Such statements are reminiscent of those heard at medical meetings ten or fifteen years ago. Medical practitioners said how can we tell whether or not the patient who pays \$1.50 per month will need an appendectomy or more the very first month. Are we in dentistry ten years behind in our thinking? Basically is there any difference between dental and medical services in this respect? Would voluntary dental plans be acceptable to the public? These are questions which should be considered seriously under present conditions.

BOOK REVIEW

A Textbook of Dental Anatomy & Physiology by *Russell C. Wheeler, D.D.S., F.A.C.D.* Associate Professor of Anatomy at Washington University School of Dentistry, Saint Louis, Mo. 422 Pages, Illustrated. W. B. Saunders Company, Philadelphia, Penna. Canadian Agents: McAinsh & Co. Ltd., Toronto. Second Edition, 1950. Price \$7.75.

In this second edition, as the title implies, the author correlates form and function to present basic knowledge of Dental Anatomy and Physiology in a concise, factual manner.

Maintaining the chapter outline of the first edition, the author has arranged his subject matter suitably for use as a text in the teaching of Dental Anatomy. Chapters I and II are elementary and Chapters III and IV introduce the subject of Dental Physiology. In Chapters V to XII are detailed the morphological de-

scriptions of the deciduous and permanent teeth, whilst Chapters XIII to XVI deal respectively with the osseous structures, the temporo-mandibular articulation, the arrangement of the teeth and occlusion.

Several improvements are noted—in certain places there is an elaboration of the text, in others corrections have been made resulting in clarification. Some new illustrations appear and the Chapter on pulp cavities contains new illustrations throughout. A bibliography replaces the glossary which appeared in the first edition. The new format is also a noteworthy improvement.

In addition to its value as a textbook, the *Textbook of Dental Anatomy and Physiology* merits a place in the library of every dentist as the knowledge it contains is basic to all phases of dental practice.

G. V. FISK

ROYAL CANADIAN DENTAL CORPS NEWS

1. Colonel E. M. Wansbrough returned to Ottawa on October 19, after inspecting the clinics of No. 14 Coy RCDC (AF), Manitoba, and Saskatchewan and No. 11 Coy RCDC in Alberta, British Columbia and Northwest Highway System. Visits were also paid to the Reserve Companies in these areas.

2. Lt.-Col. R. E. Carroll represented the Director General Dental Services in Montreal at the 26th Annual Fall Dental Clinic.

3. Lt.-Col. C. Van Dongen, Chief of the Army Dental Corps, Royal Netherlands Army, arrived in Ottawa as a participant under the North Atlantic Treaty Organization plan and is attending the dental officers' course now being held at The RCDDC School, Ottawa.

4. Colonel C. B. Climo, Deputy Director General Dental Services, attended the Meeting of the Defence Medical Dental Services Advisory Board held in Ottawa, October 12, 1950.

5. Major S. K. Oldfield has been posted to the Staff of The RCDC School after completing a five-month postgraduate course in Operative Dentistry and Crown and Bridge Prosthesis at the School of Dentistry, University of Washington, Seattle, Washington, U.S.A.

6. Major G. E. Shragge was the dental representative at a recent meeting of the Armed Forces Sub-Committee of the Medical Advisory Committee to the Dominion Statisticians held in Washington, D.C., U.S.A.

CANADIAN DENTAL ASSOCIATION NEWS

FROM THE OFFICE OF THE SECRETARY

Resignation of W. M. Blair: Dr. W. M. Blair has represented Saskatchewan on the C.D.A. Board of Governors since 1947. He has been a valued member and it is with regret that owing to the condition of his health he finds it impossible to continue. Dr. Blair has disposed of his practice in Regina and plans to resume practice in Calgary.

Journal Issues Required: The following issues of the Journal are required at Association Headquarters—January 1949, February 1949, April 1950 and May 1950. Any members possessing any of these issues and having no further use for them will assist by forwarding the named issues to The Canadian Dental Association, 211 Huron St., Toronto.

President's Western Tour: President Lowery addressed dental societies at the following centres during the month of November:

Monday, Nov. 6—Victoria, B.C.
Tuesday, Nov. 7—Vancouver, B.C.
Thursday, Nov. 9—Kamloops or Vernon, B.C.
Monday, Nov. 13—Lethbridge, Alta.
Tuesday, Nov. 14—Calgary, Alta.
Wednesday, Nov. 15—Edmonton, Alta.
Friday, Nov. 17—Saskatoon, Sask.
Saturday, Nov. 18—Regina, Sask.
Monday, Nov. 20—Winnipeg, Man.

Wednesday, Nov. 22—Fort William, Port Arthur.

Dr. Lowery was accompanied by our C.D.A. Secretary, Dr. Don W. Gullett.

How Often Do Canadians Visit the Dentist: Recently a Gallup Poll was conducted using the question—How long has it been since you went to the dentist? The result indicated that approximately one-third of the Canadian population have not been to a dentist within four years. A coast to coast survey gave the following percentages. Comparative figures are given for a similar survey conducted in the United States.

About	Canada	U.S.A.
1 month or less	9%	10%
2 to 5 months	12%	10%
6 to 11 months	14%	14%
1 year ago	16%	16%
1½ years ago	2%	2%
2 years ago	9%	10%
3 years ago	6%	6%
4 years or more	29%	27%
Never been to dentist	1%	4%
Can't remember	2%	1%
	100%	100%

Two observations are made by those who conducted the poll:

1. The 20 per cent who said they had not visited a dentist for four years or more included a small percentage who possess artificial dentures.
2. Women are slightly more frequent visitors to dentists than are men.

P.E.I. Appoints New Representative: Notification has been received from the Secretary of the Dental Association of Prince Edward Island that Dr. J. P. Miller was appointed Representative to the Board of Governors of the Canadian Dental Association at the recent Annual Meeting of that Association. Dr. L. M. Callbeck was appointed alternate.

Dr. Miller succeeds Dr. R. H. Barrett who has been representative on the Board for the last two years.

The Department of National Revenue issue each year a publication entitled "**Taxation Statistics**" which gives numerous facts respecting taxation. Among the tables to be found in this publication is one which sets forth the earnings of different groups, including the professions. The figures for the year 1948 have been recently released. The Financial Post, as of October 21 last, set forth these figures comparatively for the years 1946, 1947, and 1948. Following will be found these comparative figures for the first

nine groups in order of highest average income.

Some interesting facts are to be observed in examining these figures, particularly those under the column entitled "Average Income per Taxpayer". In 1946 members of the medical profession had the highest average income of any group but in 1947 and 1948 lawyers had the highest average income.

A notable feature is that both lawyers and medical practitioners increased their incomes for each of the years given while dentists increased their average income for 1947 over that for 1946 but received markedly decreased income in 1948. Speculation for discovery of the reason for this recession of income is not easy. Net income is represented and one guess may be hazarded in that overhead costs of practice increased greatly during 1948 which may have resulted in decreased net income. The overhead costs of dental practice are probably higher than for most other professions and it may be that the net income of dentists was affected by the rapid increase in overhead costs, which occurred during 1948.

Clipped from Financial Post—October 25th issue

Occupation	Number of Taxpayers	Total No. of Returns Filed	Total Earned Income of Taxpayers (\$'000)	Total Inv't Income of Taxpayers (\$'000)	Total Declared Income of Taxpayers (\$'000)	% of Grand Total Canada %	Average Income per Taxpayer \$	Total Tax (\$'000)	Average Tax per Taxpayer \$
Lawyers									
1946	3,792	4,072	22,692	2,064	24,756	0.51	6,528	7,510	1,980
1947	3,886	4,186	27,713	2,683	30,396	0.54	7,822	7,991	2,056
1948	4,060	4,440	30,267	3,466	33,733	0.50	8,309	7,971	1,963
Medical Doctors and Surgeons									
1946	6,343	6,793	43,891	3,468	47,359	0.99	7,466	14,122	2,226
1947	7,442	8,352	54,049	2,999	57,048	1.02	7,666	13,390	1,799
1948	6,990	7,750	54,699	3,139	57,838	0.86	8,274	12,483	1,786
Engineers and Architects									
1946	1,125	1,205	6,439	293	6,732	0.14	5,984	1,896	1,685
1947	1,114	2,014	7,755	547	8,302	0.15	7,452	2,096	1,882
1948	1,200	1,300	8,522	424	8,946	0.13	7,455	1,865	1,554
Dentists									
1946	2,993	3,163	15,100	730	15,830	0.33	5,289	3,581	1,196
1947	3,557	3,857	19,535	786	20,321	0.36	5,713	3,730	1,049
1948	3,690	3,930	19,038	870	19,908	0.29	5,395	2,837	769
Osteopaths and Chiropractors									
1946	620	770	1,878	49	1,927	0.04	3,108	332	535
1947	480	690	1,971	116	2,087	0.04	4,348	319	665
1948	720	990	2,897	87	2,984	0.05	4,144	361	501
Business Partners									
1946	38,369	48,229	133,597	5,477	139,074	2.89	3,625	30,981	807
1947	44,026	60,766	179,181	8,657	187,838	3.37	4,267	35,031	796
1948	47,540	64,280	198,226	8,316	206,542	3.06	4,345	32,335	691
Investors									
1946	52,607	81,617	19,904	184,569	204,473	4.25	3,887	64,031	1,217
1947	52,859	90,697	27,608	194,237	221,845	3.97	4,197	60,063	1,136
1948	49,430	90,250	32,250	208,692	240,942	3.56	4,874	55,511	1,123
Sole Business Proprietors									
1946	92,605	130,065	284,131	12,623	296,754	6.17	3,205	56,405	609
1947	96,971	164,481	359,892	17,394	377,286	6.76	3,891	63,139	651
1948a	85,970	126,870	356,393	17,768	374,161	5.53	4,352	57,958	674
1948b	19,880	47,710	45,008	1,530	46,538	0.69	2,341	3,361	169
Salesmen									
1946	21,090	25,450	71,494	1,634	73,128	1.52	3,467	14,169	672
1947	20,800	27,620	78,064	1,960	80,024	1.43	3,847	12,081	581
1948	21,740	29,010	84,728	2,002	86,730	1.28	3,989	11,238	517

Survey of Dental Schools Begins: The Council on Dental Education is proceeding rapidly with the work of the survey. During the summer months preparatory work was carried out. The survey team, consisting of Dean Lewis of the College of Education, University of Toronto, Dr. Arthur L. Walsh of Montreal and Dr. Harvey W. Reid of Toronto have given detailed study to methods of accreditation. In addition, this team has made visitations in order to obtain information previous to beginning the survey of Canadian schools. During September the team spent a day with Dr. Harlan H. Horner, recently retired Secretary of the A.D.A. Council on Dental Education, who has probably had more experience in such work than any other one individual. Through the kindness of the Council on Dental Education, American Dental Association, a meeting was arranged in Chicago where the members of the survey team met with members of that Council which proved to be a most profitable discussion.

It was considered advisable to have the team visit, at least, one dental school before beginning the actual survey. Dean Paul Jesserich of the School of Dentistry, University of Michigan, most graciously offered his school for this purpose.

As a consequence of the above activities the survey team has become well qualified to carry out the work.

Preliminary survey of all Canadian schools is contemplated during the present academic year. Full cooperation has been indicated from all schools, save one, at the time of writing. The initial plans of the survey cover the next three years at the end of which time, plans will be extended to make the survey a continuing one.

Distribution of the English edition of the **1950 Transactions** to the membership has now been completed. The edition in French will follow in the near future. The publication of the Transactions is intended to give the entire membership a concise summary of the work of the Association for the past year. It is the hope of the Board of Governors that members will give careful study to the various reports. The distribution of the Transactions is part of an overall effort to create a well-informed membership. Probably the best security for the future of Canadian Dentistry is in having members of the profession in possession of such factual knowledge as contained in the Transactions.

NEWS FROM THE PROVINCES

SASKATCHEWAN

Saskatchewan, the city of Regina in particular and the Saskatchewan Dental Society have lost one of their most valuable members, in the moving from Regina to Calgary in the person of **Dr. W. Blair**.

Dr. Blair was graduated from the Dental College of the University of McGill in 1925 and has practised in Regina since that time. Since 1942 he has served on the Provincial Dental Council. He served for three years as Vice-President and also for three years as President of the Council. His contribution as a counsellor has been most outstanding particularly during the latter years on account of heavy negotiations with the government. The Dental Society of our province owes Dr. Blair an expression of gratitude for his untiring efforts on their behalf. We, one and all extend the very best of wishes to Dr. Blair and his family.

Saskatchewan Dental Council Result of recent elections. Reelected — Dr. G. Hancock — Ft. Qu'Appelle, Dr. J. P. Whyte — Swift Current. New Member — Dr. R. Reid — Prince Albert. Unexpired Terms — Dr. L. Hare — Moose Jaw, Dr. M. J. MacDonell — President — Saskatoon.

The Saskatoon Dental Society was favoured by hearing a very interesting and educational illustrated lecture from Dr. A. Becker, on cancer.

Dr. Becker has spent all his time since graduation on this subject with the exception of the interval he was in the Medical Corps. He traced the development of the present program in the fight against cancer, the Cancer Commission, actual treatments, the education necessary for the profession, the education necessary for the public, the National Cancer Society and Institute, the research work, scholarships and in particular, reference was made to the Clinics in Regina and Saskatoon. Statistics are being kept and valuable conclusions are expected within the next 10 years.

The illustrations of oral cancerous lesions were very instructive to all present. L. D. H.

MANITOBA

Another of the older members of the Association has passed on leaving a reputation as a good dentist, a good fellow and a fine honest Christian gentleman. We refer to **Dr. D. P. Stratton**, a graduate of the R.C.D.S. of 1902. Dr. Stratton registered in Manitoba in 1903 and locat-

ed at Melita. He was the first resident dentist in that district and made a welcome addition to the public welfare of southwestern Manitoba.

When the first world war broke out Dr. Stratton went overseas as the dental officer with the 1st C.M.Rs. On his return to Canada in 1918 he replaced Lt. Col. W. W. Wright as O.C. of No. 10 Detachment C.D.C. and after discharge from the army located in Winnipeg, where he continued in private practice until 1945 when he took up residence on a farm at Rosser, near Winnipeg where he could raise thoroughbred cattle in which he was always interested.

On October 16 the **Winnipeg Dental Society** began its winter educational activities with the presence of the Kraus brothers of the teaching staff of Marquette University Dental School at Milwaukee. Having been here before and earned a good reputation as teaching clinicians they were greeted with a capacity audience. The dental profession of Manitoba has always had an enviable reputation with clinicians for their keen interest in dental subjects because of a sincere desire to acquire more skill and knowledge and this makes them an audience worth demonstrating and lecturing to.

Dr. Edward Kraus who is the present Professor of Crown and Fixed Partial Denture Prosthesis devoted his time to pin ledge retention for fixed bridges and made his method of operating seem not too difficult and very desirable.

Dr. Leland Kraus gave his evaluation of the new self-setting synthetic resin filling materials. He used the carpule method of proving that the materials are not desirable as filling restorations. There were many discouraged countenances when he had finished. Some of his listeners felt better when they learned that the American Bureau of Standards refuse to accept the carpule test as reliable. Time will tell. President Dr. J. B. Rumberg presided. J. F. M.

ONTARIO

University of Toronto, Faculty of Dentistry

Continuation Courses for Graduates
in Dentistry

OPERATIVE DENTISTRY

February 19-23, 1951

This course will include discussion of the philosophy of operative dentistry, oral diagnosis, treatment planning, rubber dam and local anaesthesia for operative procedures, a study of dental materials, cavity preparation and insertion of amalgam, silicate, inlays, occlusion

and periodontal considerations as related to operative dentistry, mutilated anterior teeth in young and adult patients.

Dr. Carl Miller, outstanding clinician in amalgam restorations, from Cleveland, and Dr. Louis Schultz, Professor of Operative Dentistry, University of Michigan, whose broad philosophy of Operative Dentistry includes biological as well as technical phases of the subject, will be the guest clinicians in this course.

This course will be under the general direction of Dr. P. G. Anderson, Head, Department of Operative Dentistry.

Tuition Fee \$75.00

Enrolment Limit 10

ENDODONTICS

March 12-16, 1951

This course is designed for the general practitioner who wishes to provide efficient and economic endodontic service for his patients. Dr. J. Henry Kaiser, Professor of Dentistry, Ohio State University, has accepted an invitation to be the guest lecturer and clinician.

This course will be under the general direction of Dr. George C. Hare.

Tuition Fee \$75.00

Enrolment Limit 6

DENTAL RADIOLOGY

April 2-6, 1951

This course will be devoted to the study of radiographic techniques and interpretation. Commonly used types of intraoral techniques will be demonstrated. Interpretation will be correlated with the pathology and histopathology of dental diseases.

Dr. James P. Coupland of Ottawa, a well known authority in the field of Radiology, will be the guest lecturer and clinician.

This course will be under the general direction of Drs. H. M. Worth and J. E. Moser.

Please address enquiries to: The Dean, Faculty of Dentistry, 230 College St., Toronto.

Tuition Fee \$75.00

Enrolment Limit 12

Ladies' Auxiliary To The Academy of Dentistry—The November meeting of this Society was a luncheon at Maloney's Art Galleries with Mrs. W. W. Philp, President, presiding. Mrs. J. E. Verth introduced the guest speaker, Mr. B. W. Heise, O.B.E., Deputy Minister of Public Welfare, whose interesting subject was "Child Welfare in This Changing World." Mrs. H. E. Leyland expressed thanks to Mr. Heise on behalf of the Auxiliary.

A business meeting followed and it was voted unanimously that for our 1950-51 project we add to the fund for needy children with dental abnormalities al-

ready established at the Faculty of Dentistry.

The proceeds from our annual Bridge to be held January 13 at Simpson's Arcadian Court will go towards this fund.

Dorothy J. McPherson.

Dr. James C. Devitt—The sudden passing of Dr. Jim Devitt of Bowmanville brings a pang of sorrow to many professional and community friends. He was a man of gentle nature who always wore a smile. He was quiet spoken yet he had an enthusiasm of interest in everything that made him a friend on first meeting. He loved his profession and worked for its advancement and perhaps most of all he worked among the people of his community that they might know of dental care and enjoy its benefits.

He was a public benefactor in that he took a great interest in everything in and about Bowmanville. He had a long record of public office which indicates the high esteem he enjoyed among the folk who knew him where he lived.

Dr. Jim was a great fisherman—he did enjoy both fishing and talking about it. Algonquin Park was his fishing grounds and he always had his camera along. He loved to be with his friends and tell them of his experiences, and he could do it with such vigour and enthusiasm that they were carried along with him as he lived the event all over again.

Dr. Jim will be missed at dental meetings because he always remained young in spirit. To his daughter, Mrs. Hall and his son, Mr. James W. Devitt, Dr. Devitt's friends and colleagues extend deep sympathy in the passing of their father—a kindly gentleman.—T. R. M.

An honorary membership in the American Dental Association was conferred on Dr. Don. W. Gullett during its ninety-first annual convention in Atlantic city. This is a very high tribute to the outstanding service he has given in promoting international goodwill. He is the fifth dentist to be given this distinction and the only one outside the United States.

Dentists all across Canada and wherever he is known will applaud and congratulate Dr. Gullett, affectionately known everywhere as Don, on the great honour that has come to him and which he so richly deserves.

From your legion of friends, Don, congratulations and good luck. T. R. M.

Extramural lectures given by Members of the Faculty of Dentistry, University of Toronto before Ontario dental associations are as follows—

Essex County Dental Association addressed by Dr. R. S. Woollatt on October 26.

Halton County Dental Society addressed by Dr. J. D. Purves on November 1.

Peterborough and district society addressed by Dr. J. R. Fletcher on November 2.

Grey, Bruce, Dufferin Society addressed by Dr. H. W. S. Wood at Owen Sound on November 15.

Lambton County Society at Sarnia and **Intercounty Society** at Kitchener addressed by Dean R. G. Ellis on November 14 and 22 respectively.

The Faculty Staff have also contributed to the following dental programs in the United States—

October 26-29—Dr. W. G. McIntosh—Annual Meeting of the American Academy of Periodontology, Atlantic City. Subject: Panel discussion on the Treatment of Periodontal Pockets along with Dr. Irving Glickman, Dr. Harry Lyons and Dr. Harold Ray.

November 6—Dr. M. R. Culbert—North-eastern Orthodontic Society, Washington. Subject: Biometric and Rational Therapy.

November 20—Dr. R. E. Moyers—Great Lakes Orthodontic Society, Detroit. Subject: Anatomical Landmarks in the Cephalometric Roentgenogram.

November 27-28—Dr. C. H. M. Williams—Central Section, American Association of Orthodontists, Cedar Rapids, Iowa. Subject: Correction of Abnormalities of occlusion by grinding.

The Dental Auxiliary to the Toronto Academy of Dentistry held its annual membership tea at Prince Arthur House, Toronto, on October 19.

Members and guests were received by President Mrs. W. W. Philps who was assisted by Mrs. R. G. Ellis, Mrs. F. H. Shepherd and Mrs. Earl Bancroft. Tea was served by a number of Past Presidents of the Auxiliary and members of the executive.

Dr. Ed. White of Toronto reports an interesting incident. — A "ham" radio operator living in Toronto phoned Dr. White one day to say he had been talking to a fellow amateur radio enthusiast who was a patient of his, now living in Peru. "This former patient of yours is coming to Toronto," said the operator, "and wants me to make an appointment for him with you. I'll be speaking to him tonight to tell him when he can see you." On the appointed hour and day sure enough the patient turned up for the appointment.

Ed's practice certainly covers a lot of territory, one wonders how he keeps up with it.

The Dental Nurses' Alumnae Association of Canada, at its October meeting was honoured in having Dr. Arnold D. Mason as their guest. He brought along the films he had made of his recent visit to Australia and it gave the members much pleasure to see in his pictures many of the Australian dentists who had been at the Faculty of Dentistry and also to hear about Australian customs and dental problems.

The president, Adrienne Rands, presided at the tea table and welcomed the class of 1951 who joined the members for refreshments. The student dental nurses had just been put through initiation paces on the university campus and received a warm greeting from the Alumnae.

October, 26, the Alumnae members and many of their friends participated in the Alumnae's autumn dance at the Club Embassy. The social convener, Shirley Anderson, and her committee rate orchids for providing such a happy evening.

A. COWLING

QUEBEC

To mark his 50th year in the practice of dentistry in Montreal, Dr. Frederick G. Henry was presented with a painting by Dr. Arnold Mitchell on behalf of his colleagues attending the **26th ANNUAL FALL CLINIC of The Montreal Dental Club**.

Three hundred and eighty dentists from Eastern Canada and the United States registered for the convention and were welcomed by the president, Dr. S. A. MacSween. In his presidential talk, Dr. MacSween said: "Today, we have a profession that is strong and vigorous—a profession that takes second place to none in its efforts to serve the public and to make life more comfortable for mankind. This, we have succeeded in doing to a marked degree. We have come a long way professionally in recent years, but even the strongest organism can have its weaknesses which can grow and threaten it.

"If I were to indicate what I consider to be the most important unit safeguarding our profession, I would point to the national body—The Canadian Dental Association. In two years, the C.D.A. is to celebrate its 50th Anniversary and the seed planted at the turn of the century has borne fruit which today benefits the dental life of our people from Vancouver to Sydney, Cape Breton."

Dr. MacSween asked the delegates to back the Canadian Dental Association in a program which, he said, has as its aim the establishment of more dental public health units across Canada; the basis of the Canadian plan is education, so that

preventive dentistry should be initiated with young people.

Professor John Stanley, B.A., M.A., Ph.D., Chairman, Biological Sciences Group, McGill University in discussing the evolution of the human dentition, showed how weakness in form, structure and support have developed in terms of our modern diet and way of life. Prof. Stanley stated that in the matter of teeth, primitive man was much better off than his descendants today. Prevention of many of today's dental problems could be attained by providing our children with the more fibrous natural foods.

However, where severe anomalies have developed, Dr. Hyman H. Pearson of the Mount Royal Dental Society and Montreal Endodontia Society described a case of severe disorganized adult dentition with resultant abnormal face form. He showed how, with proper diagnosis and using some novel surgical, prosthetic and psychological procedures, not only the mouth, but also the face and the mind could be rehabilitated.

With regard to the psychological procedures, Dr. James L. McCartney, S.B., M.D., F.A.C.P., Garden City, L.I., Member American Psychiatric Association and Former Commander Medical Corps, U.S.-N.R., presented a paper entitled "Psychosomatics in Dentistry." Dr. McCartney stated that "many dental patients are amenable to suggestion or hypnosis; such suggestion may be used for relaxation and relief of pain during dental operations."

A three day progressive clinic was presented by Dr. Wallace N. Kirby, B.S., D.D.S., Professor of Practice Management, Chicago College of Dental Surgery, Loyola University, Chicago, Ill., on "Practice Management and Economics." Dr. Kirby divided his subject into three distinct sessions: presentation of dental service; appointment handling; and common office problems.

Other clinics presented were "Lesions of the Soft and Bony Structures About the Mouth and Jaws," by George W. Christiansen, A.B., D.D.S., M.S., Attending Oral and Maxillo Facial Surgeon, Detroit Memorial Hospital, Former Chief of Oral Surgery, Naval Medical Centre, Bethesda, Md.: "Immediate Dentures," by Browning O. Chartrand, D.D.S., F.A.C.D., Senior Dentist, State Hospital, Agnew, California: "Prevention of Periodontal Disturbances by Occlusal Adjustment," by William G. McIntosh, D.D.S., Assistant Professor of Periodontology, Faculty of Dentistry, University of Toronto: "Direct and Indirect Gold Inlays," by Donald C. Gordon, B.Sc., D.D.S., Asst. Professor of Operative Dentistry, McGill University, and Roland T. Lamb, B.Sc., D.D.S., Montreal: "Partial Denture Serv-

ice for the General Practitioner," by Ben William Oesterling, D.M.D., Commander U. S. Navy Dental Corps, Director of Officer Training U. S. Naval Dental School, Bethesda, Md.; "Alginate Hydrocolloid Impressions for Multiple Fixed Bridges or Inlays," by Kenneth R. Pfeiffer, D.D.S., Washington, D.C., International Association for Dental Research, National Bureau of Standards; "Practical Psychology and Operative Procedures for the Child Patient," by Alfred E. Seyler, B.A., D.D.S., F.A.C.D., Detroit, Mich., Assoc. Professor and Director of Children's Clinic, University of Detroit, and Past President American Society of Dentistry for Children.

Entertainment took the form of daily lunches, and a dinner dance with special entertainment being provided for the ladies. The luncheon speaker was Douglas J. Wilson, M.A., Ph.D.

Among those from out of town attending the convention were Drs. R. P. Lowery, President of the C.D.A.; Don W. Gullett, Secretary of the C.D.A.; M. H. Garvin, Editor of The Journal of The C. D.A.; P. G. Anderson, Chairman of Publications of The C.D.A.; and G. Ratté, of the Board of Governors of The C.D.A.

Congratulations as usual were extended to Dr. M. L. Donigan, Chairman of The Fall Clinic, and his many assistants, for their untiring enthusiasm which made the convention the success it undoubtedly was. Dr. Donigan is already planning for next year's Fall Clinic which will be held October 17, 18 and 19 and promises that the 27th will be even bigger and better than the 26th . . . so mark your appointment books now . . .

A. T. Donohue.

—R. F. H.

The Mount Royal Dental Society held its regular monthly meeting on Oct. 10. The guest speaker was Dr. Winston C. Bushell, Professor of Prosthetics and Chairman of the Department of Crown and Bridge in the Dental Faculty, McGill University, his subject being "An Illustrated Lecture on Treatment of Accidents to Teeth of Young People."

Dr. Bushell was introduced by Dr. M. H. Toker who highlighted Dr. Bushell's career. The speaker then presented a series of case reports, illustrated with lantern slides, showing various types of treatment for traumatized teeth. Dr. Bushell demonstrated the value of retained roots in Restorative Dentistry. Instead of extraction, these fractured teeth can be treated and root-filled and replanted. These teeth must be splinted for an indefinite time and will usually be retained long enough to allow the young patient to grow old enough to permit the use of prosthetic appliances.

The speaker was thanked by Dr. S. Hershon and presented with a gift as a small token of appreciation for a most interesting and enlightening paper.

R. M. Wiener

Antibiotics are only adjuvants to and not substitutes for sound medical and surgical principles, stated Dr. Gertrude Kalz at the September meeting of **The Montreal Endodontia Society**. Introduced by the president, Dr. L. Rosen, Dr. Kalz, Associate Professor of Bacteriology, McGill University, spoke on "Trends in Antibiotic Research and Therapy."

After a brief historical introduction, the rather rigid requirements which an antibiotic substance must meet before it is released for clinical use, were discussed. Of the seven antibiotics in use at present, Bacitracin and Thyrothrycin are used for topical administration mainly, while Penicillin, Streptomycin, Aureomycin, Chloromycetin and Terramycin are in use for systemic treatment; the last three are also efficacious for oral application.

With the proper selection and dosage of these antibiotics, the majority of common infections can be controlled. In order to use antibiotics rationally and to best advantage, the causative organisms of an infection must be known. Each of the antimicrobial agents in use is specific as regards the groups of organisms against which it is effective.

With regard to the resistance by the microbes to a certain antibiotic, Dr. Kalz stated that in practice, only the development of resistance to the tubercle bacillus to streptomycin is of major concern to the clinician. Methods of avoiding or minimizing this danger were discussed.

The use of antibiotics in dental surgery may be divided into prophylactic and therapeutic. It is suggested to use antibiotics as prophylactic agents in every patient with a history of rheumatic fever. Penicillin or Aureomycin ought to be given to such patients before, during and after surgery is performed in the oral cavity. The relatively high percentage of blood cultures growing streptococcus viridans even after simple tooth extractions and the low toxicity of the antibacterial agents seem to warrant fully their prophylactic use in such cases. This attitude is justified probably also in all patients in whom pronounced inflammation of the gums is present. The combined application of penicillin and sulphadiazine locally after tooth extraction and other surgical procedures in the mouth is advocated by some dental surgeons as a routine procedure. The possible delay in blood clotting time due to very high concentrations of penicillin may be an objection to this routine according to Fleming.

In the treatment of already established infections certain general principles must be followed: 1. The nature of the causal organisms and their sensitivity to the various antibiotics should be determined whenever possible for the choice of the most suitable drug. 2. It must be kept in mind that the antibiotic must reach the organism in order to act and that after parenteral administration the concentrations in any particular region are entirely dependent on the blood supply. In necrotic or fibrotic tissues the blood supply is poor and local application alone or as adjunct to systemic therapy may be the method of choice. 3. The antibiotic must be given in sufficiently high dosage to provide adequate tissue concentrations. 4. It is highly important to realize that in most instances the effect of antibiotics in vivo is mainly bacteriostatic and that the natural defence mechanism of the body is absolutely essential for the complete eradication of any infection. Above all, the physician and surgeon must at all times be aware that antibiotics are only adjuvants to and not substitutes for sound medical and surgical principles.

R. F. H.

BRITISH COLUMBIA

With the return of the **Director of Preventive Dentistry of the Provincial Department of Health and Welfare**, from attendance at the University of Toronto during the past year, the program of dental public health in this Province should move into action at an accelerated pace. Dr. McCombie has attended the course in dental public health, and resumes his duties with the Provincial Government with keen enthusiasm, and a confident outlook to the future of this branch of the Department of Health and Welfare of British Columbia. He attended a meeting of the Dental Public Health Committee of the British Columbia Dental Association in October, outlining the plans of his Department for the future, and also speaking on the position of the dental profession in civil defence work in the event of a national emergency.

Considerable progress is reported with the work of the **Library Committee of the Provincial Dental Association**, and it is expected that a provincial dental library will be in operation very shortly. Members at large have been asked to hand in suggestions as to choice of books and periodicals, and the lists proposed by the committee were accepted at a meeting of the executive committee of the provincial Association.

A survey of fees is being conducted by a committee of the provincial Association, and a considerable number of replies

to a questionnaire have already been received. When a sufficient proportion of replies have been received and tabulations made, a list of operations, showing minimum fees will be prepared and submitted to the members. In view of the considerable differences observed in the schedules set up by the Workmen's Compensation Board, and various Social Services organizations, as well as in fees charged by practitioners in various parts of the Province, it is considered advisable to establish some basic standard which might serve as a pattern for the various organizations and individuals concerned.

A request has been received from the **Kootenay Dental Society** for a clinician to speak to their group in the near future. The matter brought to the forefront again the idea of preparing a group of clinicians and speakers, including, perhaps, members of the provincial dental bodies and a representative of the Department of Health and Welfare, to make a brief tour of the various centres in the interior of the Province. The matter is under consideration by a committee of the Association.

The **Vancouver and District Dental Society** welcomed the President and Secretary of the Canadian Dental Association at its November monthly meeting. At the usual afternoon meeting, Doctor John Ingle, Associate Professor of Endodontia at the School of Dentistry, University of Washington, spoke on "A Simplified Method of Root Canal Therapy for the General Practitioner."

The **Fraser Valley Dental Society**—that most enthusiastic organization with members scattered over a district over 60 miles long, along the banks of the Fraser—has resumed monthly meetings, beginning in October with an address by Doctor H. A. Simmons, on Oral Surgery. Meetings are held in various towns in the Valley, and the attendance reflects a high degree of enthusiasm on the part of its members.

L. G. R.

Dr. A. J. Garesch's Birthday Party:—"HAPPY BIRTHDAY to Dr. A. J. Garesch of Victoria, B.C." was the order of the day, Tuesday, October 24, when his dental confrères and a host of other friends wished him well on the occasion of his 90th birthday.

Numerous telephone calls, personal congratulatory messages, and even newspaper interviews did not keep the genial Doctor from caring for his patients on this very special morning as he does every morning and three afternoons of each week. That evening Dr. Garesch was a dinner host to 11 of his closest associates in the profession including two

lifelong friends from Seattle, Dr. George Williams, father of the West Coast Gold Foil Study Clubs, and Dr. Carl Renick, noted clinician and teacher.

Volcanoville, California, was the birthplace of this remarkable nonagenarian, but he came to Victoria at the age of six. While in his teens he found his way to Philadelphia where he became employed as a machinist in the railroad shops. This training provided the foundation of his present hobby of machine tooling, which he carries on in the well equipped basement of his home during his spare afternoons.

Dr. Garesché became apprenticed to dentistry in 1881, graduated from the University of Pennsylvania, practised in Cuba, and eventually returned to Victoria in 1895 where he has been in active practice ever since. He was one of the original members of the first gold foil study group formed in Seattle and has never lost his interest in this work. He is a skilled ceramist and today bakes his own porcelain inlays and jacket crowns. He is forever trying to improve his technique and the future of dentistry means every bit as much to him as it does to the most recent graduate.

So, Happy Birthday to Dr. Garesché!
May he live to enjoy many more of them.

R. H. McDougall

Editor's Note: Don't let your heart grow cold and you shall carry youth with you into the teens of your second century.

GLADSTONE

ALBERTA

Dr. L. K. Brooks of Calgary has been appointed **Associate Editor for Alberta** of the Journal of the Canadian Dental Association. We wish Dr. Brooks every success in this new field of endeavour.

M. H. G.

The **Calgary Dental Society** held its first business meeting of the 1950-51 season in the Palliser Hotel, October 10. Dr. R. T. Shillington was in the chair in the absence of Dr. C. M. Johnson. Eleven recent graduates were guests of the Society. For their benefit Dr. H. L. Free-land listed the activities and functions of the Dental Council of Canada and the Alberta Dental Association. Dr. H. Baden Powell then presented a report on the Canadian Dental Association.

Final plans were made for the Society to receive the Telephone Extension Pro-



DR. A. J. GARESCHÉ

gram from the University of Illinois.

The Society held its final golf tournament and banquet at the Calgary Golf and Country Club.

Following the tournament a social hour was held to accommodate the non-golfers. Dr. A. C. Steeves, President of the Alberta Dental Association, was chairman of the banquet. He presented the Dave Bowan Trophy to Dr. C. M. Johnson, our 1950 Champion. Dr. Steeves then introduced Dr. Walter Johns, President of Calgary Medical Association. Dr. Johns spoke on the Medical Societies' reaction to state medicine.

Mr. J. J. Saucier, K.C., President of the Calgary Bar Association, then spoke on the Dental Protective Association of Great Britain and Ontario. He pointed out the functions of these Associations and their many advantages to the profession.

Dr. P. G. Atkinson and Dr. Ralph M. Duncan of the Golf Committee were then thanked by Dr. Steeves for their efforts in making our first year's golf tournaments so successful.

L. K. B.

BRITISH COMMONWEALTH NEWS

GREAT BRITAIN

New London Health Centre—With the ultimate objective of a socialized health service, the British Government is en-

gaged in promoting the establishment of health centres which are to be the bases of the service. Whole time medical and dental staffs with their auxiliaries will provide comprehensive medical care, and

may be expected to replace the present system of private practitioners in course of time.

The Woodberry Down Health Centre now under construction is one of the first of its kind. The County of London has been divided into 162 health service areas each of 20,000 persons, each having a centre. The Woodberry Down Centre is calculated to serve some 18,000 with a possible maximum of 24,000, but persons outside the area will not be precluded until health centres are available for other areas. In addition to the proposed health centre the following amenities will be provided on the estate: a junior school, an infants' school, a senior school, a community centre, a library, a shopping centre, old people's homes.

A. M. A. Finds No Evidence of Improved British Health.—The quality of medical care in Britain has been diluted by unequal distribution of physicians throughout the population under the National Health Service, according to the report of a five-man committee of the American Medical Association which spent six weeks in England early this year. The committee's report, published in *The Journal of the American Medical Association* August 19, states also that, despite greatly increased expense of the plan over original estimates there is no evidence of significant improvement in British health. Abuses of the service are evident on all sides, according to the report, and must eventually lead to even tighter government control.

GENERAL NEWS

General Dental Association Survey of Dentists as reported in the *Journal of the A.D.A.* for September indicates that 91.8 percent of all dentists hold the D.D.S. degree, the remainder holding the D.M.D. degree. More than one fifth (21.0 percent) have earned some type of bachelor's degree (B.S., B.A., B.E., Ph.B., and so forth) but no graduate degree, and 2.5 percent have earned a master's degree. Ten dentists among the respondents were also doctors of medicine, but only two were Ph.D.'s. A total of 24.5 percent reported one or more non-honorary degrees in addition to the dental degree.

Approximately 19 out of every 20 (94.7 percent) of the dentists who returned questionnaires spent the largest part of their time in independent practice. Of these entrepreneurs, 96.6 percent conducted an 'individual' practice, while 2.4 percent were in partnership and 1.0 percent (34 dentists) were associated in group practice. Another small group, those employed by another dentist, brings the total of private practitioners to 95.3 percent of the sample.

... Salaried dentists are younger on the average (41.8 years) than independent dentists (44.7 years). Dentists who are employed by other dentists are considerably younger (32.4 years) than salaried dentists as a group (41.8 years).

Of the respondents, 7.8 percent classified themselves as specialists. It is recognized that some of these would not meet rigorous requirements for classification as specialists... Periodontists are diplomates of their board in a greater proportion (41.2 percent) than are any other specialists. Paedodontists (87.5 percent), orthodontists (77.9 percent) and periodontists (76.5 percent) are all

high in ratio of membership in their specialty societies. Paedodontists have relatively the fewest licensed as such by state licensing authority (9.4 percent) while oral surgeons (22.2 percent) and orthodontists (21.3 percent) have the greatest proportions of licensees... Women dentists showed a marked tendency to become orthodontists and paedodontists. One-third of all female respondents classified themselves as such, against only 4.3 percent of all male respondents... Specialists were asked what formal training preceded their establishment as specialists. Oral surgeons and orthodontists were distinguished by low percentages (3.1 and 4.0, respectively) reporting no formal training. For specialists as a group, by far the most usual type of training reported was graduate school and short courses...

Almost two-thirds (65.6 percent) of all survey participants employed at least one full-time dental assistant, technician or hygienist. Full-time dental assistants were employed by 64.0 percent, indicating that only 1.6 percent employed hygienists or technicians but no dental assistant. Full-time dentists were employed by about one of every 50 respondents (2.1 percent). Assuming that the net sample is representative of all dentists with respect to number of employees, and further assuming that there are 76,000 practising dentists in the United States, the total numbers of full-time employees of dentists are approximately as follows: dentists, 1,900; hygienists, 3,600; technicians, 3,300, and assistants, 55,200... The mean salary for dentists employed by other dentists was \$513, but there was great variability, the standard deviation being \$224. Dental assistants were paid a mean salary of \$149. The mean reported for technicians

(\$264) was higher than that for hygienists (\$236).

Dentistry Defined.—Dentistry is the Health Service specifically concerned with the establishment, maintenance, restoration and improvement of the health, function and appearance of the oral cavity and its associated parts in their relationship with the individual as a whole. This includes the recognition of the oral signs of systemic diseases, the prevention and treatment of oral diseases, injuries, malformations and deficiencies; the repair of teeth when damaged by accident or disease, and their replacement when lost. The Field of Dentistry then, is comparable, with the Field of Ophthalmology, Laryngology, Otology and Dermatology; and its social importance and opportunities are at least as great. It is, therefore, reasonable to define Dentistry as "Odonto-Stomatology, Branch of Medicine."

The above definition was submitted by the Hygiene Commission to the 37th Annual Session of the International Dental Federation. It was subsequently adopted by the World Health Organization.

The Third Annual Meeting of The Defence Dental Association was held at the Fort Garry Hotel, Winnipeg, September 22-23, 1950.

Delegates from every provincial branch of the Dominion were present, as well as Reserve Force, R.C.D.C. commanding officers.

The two day meeting completed a heavier than usual agenda, with considerable time devoted to amending the constitution and adjusting the construction of the executive body.

The Reserve Army representatives were particularly interested to hear the Director, Colonel E. M. Wansbrough, address the meeting on the present status of the Reserve Force and the Active Army R.C.D.C.

In accepting the position of President for the ensuing year, Colonel John Edgecombe, O.B.E., paid fitting tribute to the retiring member Colonel D. S. Coons. He spoke of his long active military career and recent keen leadership in the D.D.-A.C. Other officers elected were: 1st Vice-President, Lt. Col. J. P. Whyte; 2nd Vice-President, Lt. Col. L. Kent; 3rd Vice-President, Major M. McDougall; Secretary-Treasurer, Major H. C. Thompson.

Next year's annual meeting is planned for Ottawa, Ontario.

Major H. C. Thompson

Marquette University School of Dentistry held a seminar on "**Heart Disease as It Affects the Practice of Dentistry**," November 9-10 at the Medical School Auditorium, Milwaukee.

A postgraduate course in "Preventive Dentistry for Children" was conducted November 13-15.

The National Health Week will be observed February 4-10. The overall objective is Good Health for All Canadians!

IN MEMORIAM

John R. MacCrostie of Vancouver, B.C., aged 64, died October 1. He was born in Ontario and practised Dentistry in Vancouver for more than 25 years.

He was a past master of the Masonic Lodge of Red Deer, Alberta, and a past exalted ruler of the Benevolent and Protective Order of Elks No. 1 Vancouver Lodge.

Dr. MacCrostie is survived by his widow, a son, Dr. Watson MacCrostie of Vancouver, a daughter and three grandchildren.

Robert Hamilton Cowan of Kingston, Ontario, and formerly of Hamilton, aged 84, died suddenly on October 2, as a result of an accident near Orangeville, Ontario. His wife was killed in the same accident.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1899. He began his practice in Hamilton where he continued until retirement in April of this year when he moved to Kingston, Ontario. In January 1949 an honorary membership in the R.C.D.S. was conferred on him resulting from 50 years' active practice in Ontario.

He was a member of the Toronto Baptist Church, a former president of the Hamilton Dental Association, and a member of the Board of Directors of the R.C.D.S. of Ontario from 1919-1922. He was also a past Master and honorary member of Temple Masonic Lodge, Hamilton, and for 30 years was its treasurer.

Dr. and Mrs. Cowan are survived by one daughter and one son.

IN MEMORIAM

Dr. Coburn of Nipawin, Saskatchewan, died in October. He was born at St. Stephen, N.B., in 1884 and received his education in St. John. He was graduated from the Tufts Dental College in Boston, Mass., in 1916. After practising in the East for some time he moved to Western Canada in 1920, and moved to Nipawin in 1940, where he practised until his death. He was a member of the Masonic Lodge, Oddfellows, Knights of Pythias and Psi Omega.

Dr. Coburn is survived by his widow and five sons. His loss will be felt greatly in the community as Dr. Coburn made a real contribution to the life of those around him.
L. D. H.

Harry C. Duffin of Toronto, Ontario, died October 15. He was graduated from the Faculty of Dentistry, University of Toronto, in 1911 and practised for thirty years before retiring in 1942, due to ill health.

During the Second World War he served with the RCADC in Canada. He was a member of the Victoria Presbyterian Church, and held the office of supervisor of Dental Services of York Township during the years 1934-36.

Dr. Duffin is survived by his widow, a daughter, Barbara, Toronto, and two sons, Norman Duffin, Toronto, and Dr. John D. Duffin, Calgary.

James Carroll Devitt of Bowmanville, Ontario died at Toronto Western Hospital on November 6, at the age of 76.

Dr. Devitt was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1899. He had practised for more than 50 years. In January 1949 he was made an honorary life member of the Royal College of Dental Surgeons. He was an active member of the Ontario Dental Association of which he was a past president and an honorary life member. For a number of years Dr. Devitt was a member of the Dental Public Health Committee of the Ontario Dental Association and always interested in promoting dental education.

Dr. Devitt took a great interest in the community life of Bowmanville. He was Recording Steward of Trinity United Church, and Superintendent of the Sunday School. He was a member of Bowmanville Board of Education for more

than 25 years and a charter member of Bowmanville hospital board. He has been president of the Canadian Club, Rotary Club and Chamber of Commerce. He was a member of the Masonic Order and Scottish Rite; a past Grand Noble of the Independent Order of Oddfellows and one month ago he received his fifty year jewel from this order.

In his younger days Dr. Devitt was an active sportsman, particularly interested in hockey and soccer. In later years his hobbies were fishing and movie photography. He knew Algonquin Park like one of the guides, and his great love was to get off on a canoe trip with fishing tackle and camera. His pictures of wild life and scenery made him a much sought after speaker on nature subjects.

Dr. Devitt was predeceased by his wife several years ago but he leaves one daughter and one son as well as two sisters.

Bruce Edward Eaid of Simcoe, Ontario, aged 58, died on September 26.

He was graduated from the College of Dentistry of the Royal College of Dental Surgeons of Ontario in 1916. He practised his profession in London until 1937 when he moved to Simcoe where he continued until his death.

He was a member of St. Mary's Roman Catholic Church, fourth degree Knight of Columbus, and a former president of the Simcoe Liberal Association.

Dr. Eaid is survived by his widow, one daughter and four sons.

J. R. Paton of Vancouver, B.C., aged 85, died October 10. For some years he taught school before entering the profession of Dentistry.

He was an active member of the United Church and was also a former member of Cameron Lodge, A.F. and A.M., Dutton, and of Kintyre Camp, Sons of Scotland.

Dr. Paton is survived by his widow, a son and a daughter, also a sister and brother.

Durward Portland Stratton of Winnipeg, Manitoba, aged 76, died November 4. An "In Memoriam" article appears in the Manitoba News Section of this issue of the Journal.

Le Journal

DE L'ASSOCIATION DENTAIRE CANADIENNE

VOLUME 16

DECEMBRE, 1950

NO 12

Prévention et élimination de la douleur dans les procédés dentaires*

par CONRAD BROUILLET, B.A., D.D.S., Loretteville

"La douleur, d'après Behan, c'est l'interprétation d'un phénomène anormal et généralement souffrant qui survient dans l'organisme. Elle ne peut être considérée comme une sensation proprement dite, mais plutôt comme le résultat de la perception et de l'interprétation de la sensation par l'esprit."^[1]

La douleur est la réaction sensorielle la plus profonde. Beaucoup la considèrent comme une forme vraiment spécifique de la sensation et, dans l'évaluation des réactions humaines, elle est regardée comme une impression exagérée et déplaisante qui produit une réaction, tant mentale que physique, dépendant de l'origine de l'impulsion nerveuse et de la réaction de l'organisme individuel.

Même si l'homme doit regarder la douleur comme la meilleure sauvegarde de sa vie, ceci ne l'empêche pas de faire tout en son pouvoir pour la prévenir et l'éliminer, ne serait-ce parfois que pour se donner l'illusion qu'il est hors de danger. Ainsi, de tous temps, l'homme a fui la douleur. Et l'on ne saurait croire combien précoce se manifeste cette crainte de la douleur. En effet, de toutes les sensations qui existent chez un enfant, n'est-ce pas cette conscience de la douleur qui prime toutes les autres. A peine un enfant comprend-il, que son expérience lui dit que le feu brûle et cette impression

douloureuse éveille son instinct, si ce n'est sa conscience, à éviter dans l'avenir ce genre de sensation.

S'il faut en croire le consentement universel, la douleur dentaire est entre toutes la plus désagréable. Et fort heureusement pour les peuples civilisés, surtout, cette douleur, comme nombre d'autres, a dû céder devant la plus grande découverte des temps modernes, l'anesthésie. C'est là un contrôle radical de la douleur. Quant aux formes d'administration de l'anesthésie avec le minimum de douleur, ceci pourrait faire l'objet d'une autre étude. Pour nous, nous nous bornerons à étudier les divers moyens, à part l'anesthésie, de prévenir et d'éliminer la douleur en dentisterie opératoire seulement.

De la définition de Behan, il ressort que la douleur, en plus d'être le résultat d'une sensation, est aussi une interprétation par l'esprit^[2]. Envisagé sous cet angle, le contrôle de la douleur présente donc un double aspect, psychique et physique. Mais, avant d'entreprendre l'exposé des deux sujets qui feront l'objet de cette étude, il serait opportun, je crois, (après avoir défini la douleur) d'expliquer l'histologie de la dent en rapport avec le système nerveux dentaire. Ceci nous aidera grandement à comprendre les effets douloureux produits par certains phénomènes physiques.

*Thèse qui a valu à son auteur le deuxième prix du concours de Mémorial de Guerre de l'Association Dentaire Canadienne, 1950.

Les ramifications des branches nerveuses pénètrent d'abord dans le foramen apical et de là s'étendent le long de la couche des odontoblastes^[3]. Ces ramifications nerveuses s'infiltrant même assez fréquemment entre les odontoblastes, à un point tel que leurs extrémités semblent se confondre avec celles des cellules de la couche odontoblastique^[4]. Bien qu'on soit fortement incliné à le croire, ces ramifications ne pénètrent apparemment pas dans les tubulis dentinaires. Ce sont elles qui donnent à la pulpe sa sensibilité, en même temps qu'elles canalisent dans la couche odontoblastique, la sensibilité de toutes les parties de la dentine. C'est un des rares endroits de l'organisme où il semble y avoir sensibilité sans qu'il existe de nerfs. Certains auteurs émettent l'hypothèse que ce serait la cellule dentinaire elle-même qui serait sensible et que le rôle du nerf serait uniquement de transmettre la sensation reçue par ces cellules.

La pulpe, pour ce qui est de son rôle sensitif, ressemble aux autres tissus du corps, mais avec cette différence qu'elle possède une sensibilité beaucoup plus subtile et beaucoup plus grande^[5]. Voilà une explication de la douleur intense causée par le mal de dents. Cette sensibilité accrue est due en grande partie à l'arrangement des tissus de la pulpe et à la fragilité des parois des artères et des veines. De là cette douleur lancinante du mal de dents, rythmée sur les pulsations cardiaques.

La pulpe est de plus complètement emprisonnée dans le centre de la dent et occupe la totalité de cet espace. Elle est entourée de tissus durs et tellement bien préservée contre les chocs extérieurs qu'en des conditions normales, seuls les changements de température l'affectent. La pulpe est donc un organe interne et, comme tel, privé du sens du toucher. Car là, comme ailleurs, le vieux dicton a toujours raison: "C'est le besoin qui crée l'organe." Peut-être serait-ce là une explication plausible de la difficulté de localiser avec sûreté une douleur dentaire.

Nous pouvons maintenant aborder

plus à l'aise le sujet proposé: à savoir, les différentes causes de douleur en dentisterie opératoire et les moyens de la prévenir ou mieux de les éliminer. Si l'on se souvient bien, la question présente un double aspect, physique et psychique.

Du point de vue physique d'abord, une foule de causes ont été trouvées et autant de moyens de les éliminer. Lorsqu'il s'agit, par exemple, de préparer une cavité ou une pile, tous les auteurs qui ont traité de la question s'accordent à dire que l'usage d'instruments bien aiguisés réduit de beaucoup la sensibilité. On explique ceci par le fait que le développement de chaleur causée par le frottement est moins considérable. Mais ceci n'est pas suffisant, car, même aiguisée, une fraise ou une pierre montée, menée avec rapidité sur une dent produit une douleur semblable, sinon pire, à celle produite par les instruments non-tranchants.

Certains auteurs qui croient à la nécessité d'un meulage ou d'un fraisage rapide ont inventé diverses méthodes pour empêcher la production de chaleur causée de cette façon^[6]. C'est ainsi que J. Sherman préconise l'usage d'un appareil vaporisateur d'eau froide attaché au contre-angle ou à la pièce à main et refroidissant constamment la dent. Une récente découverte nous permet d'espérer des résultats encore bien supérieurs à ceux-ci. En effet, l'Université de Michigan enseigne l'usage d'un nouvel appareil apparemment inoffensif. Cet appareil, le Airdent, ne produirait pas de chaleur, ni de vibration et n'affecterait pas les tissus mous. L'avenir seul nous renseignera sur son efficacité.

Un autre méthode fortement conseillée pour diminuer la sensibilité de la dentine, c'est l'emploi de la digne suivi d'un jet d'air chaud sur la dent^[2]. C'est ce qui faisait dire à Louis Jack: "Enlevez l'humidité des tissus de la partie concernée, et vous vaincrez la sensibilité^[7]."

Après avoir employé ces moyens plutôt simples avec un succès relatif, les dentistes, surtout depuis le début du 20e siècle, et toujours dans le but d'enrayer la douleur, portèrent leurs recherches sur la chimie.

La cocaïne fut l'un des premiers médicaments employés pour désensibiliser la dentine^[2]. Mais le plus populaire, vers 1900, fut le "Vapocaine", qui consistait dans une solution de cocaïne dans l'éther sulfurique. Les merveilleux résultats qu'on en attendaient étaient basés sur le fait que l'éther en se volatilisant laissait la cocaïne sur les fibrilles dentinaires qui l'absorbaient.

Le Dr Ottolengui fut le premier à employer le chlorure d'éthyle pour désensibiliser la dentine hypersensible. Si le jet direct de chlorure d'éthyle surprend trop la dent, on applique du gutta-percha sur la cavité. On dirige alors le jet sur le gutta-percha durant quelques instants, pour laisser la dent s'habituer graduellement au changement de température provoqué par le chlorure. Une fois ce stage arrivé, le jet est placé directement sur la dent sans effet désagréable pour le patient. Employé de cette façon le chlorure d'éthyle s'avère très efficace pour enrayer la douleur, mais uniquement pour les travaux d'accès commode et de peu de durée.

Dans le journal "Dental Items of Interest," de 1914, le Dr John P. Buckley présenta à son tour une pâte aux qualités merveilleuses^[8]. Elle était composée, de néothésine, de thymol, de trioxyméthylène et de vaseline. Comme pâte désensibilisante, elle fut de fait trouvée merveilleuse par nombre de dentistes du temps, qui lui reconnurent en même temps un splendide pouvoir de dévitalisation de la pulpe. Inutile de dire que cette découverte ne tarda pas à être oubliée.

Moins de vingt-cinq ans plus tard, le Dr Hartman fonda des espérances sur un liquide désensibilisant dont le principe était basé sur l'hypothèse que les tubulis dentinaires ne contiennent pas de substance nerveuse, et le succès de l'application de ce liquide dépend de l'action du thymol sur les lipoides^[9]. L'expérience a démontré que cette solution Hartman n'est bonne que jusqu'à un certain point. En effet, pour que cette solution soit efficace, il faut que la dentine ait été préalablement exposée. Et l'on sait par ailleurs que la partie la plus sensible de la dent est le point de jonction énamo-

dentinaire, pour lequel la solution Hartman ne peut rien. De plus, la digue est de rigueur dans l'application de cette solution. Mais si l'on se sert de rouleaux de coton pour empêcher l'humidité, il faut auparavant enduire les gencives de vaseline. La cavité est ensuite remplie de coton hydrophile sec et alors une autre boulette de coton saturée de solution est mise en contact avec le coton de la cavité, assurant ainsi le contact de la solution avec toutes les parties de la cavité. Cette solution ne doit être appliquée que sur la dentine déshydratée. Environ une minute ou deux après avoir enlevé la boulette de coton de la cavité, on assèche avec un jet d'air chaud. Il faut parfois deux ou trois applications avant d'obtenir une désensibilisation complète surtout lorsqu'il s'agit de dents cariées ou de patients relativement âgés. En définitive, c'est plutôt l'assèchement de la dent qui diminue la sensibilité.

Il arrive souvent que les opérations d'assèchement et de fixation de ponts, d'incrustations ou de couronnes sont extrêmement sensibles^[10]. Dans ces cas, Tylman conseille d'employer pour l'assèchement de l'alcool à 70%, plutôt que de l'alcool à 90% et des boulettes de coton sèches. Plusieurs auteurs recommandent l'usage d'une partie de chloroforme pour trois parties d'alcool.

Pour la stérilisation, Heine préconise encore du thymol à 50% dans l'alcool et le phénol suivi d'alcool^[12]. Certains auteurs croient qu'un bon nettoyage mécanique des parois de la cavité, suivi d'application d'alcool à 70% et d'un bon assèchement est suffisant. Ces médicaments réchauffés à la température du corps peuvent être appliqués sans désagrément pour la patient. Mais si la dent est extrêmement sensible, on badigeonne les parois de la dentine exposée avec une faible solution de Cresatine recouverte d'une mince couche de vernis protecteur.

L'avènement des ciments, dits de porcelaine, pour les dents antérieures est certes une belle découverte au point de vue esthétique^[11]. Mais, étant donné la structure histologique de la dent et la composition chimique de ces ciments, il en résulte souvent que la vitalité des

dents retenant de telles obturations est fort compromise. Ceci est dû au fait que ces ciments contiennent de l'acide phosphorique glacial. Cet acide communique avec la pulpe par les tubulis dentinaires et lui cause une irritation constante, qui se traduit ordinairement par une hyperémie d'abord et par de la douleur ensuite. Il est donc important de prévenir cette douleur et ses désagréments. Pour y arriver, on n'a qu'à sceller les tubulis dentinaires avec un vernis protecteur, lorsque la cavité est peu profonde^[12]; mais lorsqu'elle est profonde, on emploie plutôt un ciment à base d'oxyde de zinc ou d'oxyphosphate. Cette méthode donne d'excellents résultats.

Même dans le cas d'obturations métalliques, Paffenbarger conseille, lorsqu'on est dans le voisinage de la pulpe, d'employer un ciment protecteur^[13]. Et ceci pour deux raisons. D'abord, parce que la pulpe, étant extrêmement sensible à tout changement subit de température, ne pourrait supporter une obturation qui, vu la conductibilité de son métal, produirait ce même changement de température et, par ce fait même, affecterait la pulpe. Ensuite, ce ciment protecteur, étant donné sa composition, peut servir d'isolant et prévenir ainsi les chocs électriques ou galvaniques possibles, en présence d'or et d'amalgame. Pour remédier aux douleurs ou malaises causés par un tel état de choses, Tylman préconise d'employer un ciment protecteur d'au moins un seizième de pouce d'épaisseur, pour réduire la conductibilité du métal^[10].

Au dire de Paffenbarger, tous ces ciments préparés à base d'acide doivent être malaxés assez épais pour qu'il y entre le plus de poudre et le moins de liquide possible, réduisant ainsi leur irritabilité sur la pulpe^[13].

Il est une douleur intense et quasi-inexplicable que l'on rencontre assez souvent dans la pratique dentaire^[14]. C'est une douleur qui se localise ordinairement au bord gingival de la dent, surtout lorsqu'il y a exposition de ciment. McCall mentionne cette douleur comme aigue^[15]. En certains endroits, elle darde, sous l'influence d'un excitant chimique et peut demeurer encore quel-

ques instants après contact avec cet excitant, comme le sucre. De plus, d'après Black, c'est une douleur qui ne peut tendre à la régression, puisque la dent, contrairement à la dentine n'a pas d'organisme de protection. Jusqu'ici, les meilleurs résultats dans l'élimination de cette douleur, ont été obtenus avec une solution de formaline à 40%^[16]. Il s'agit simplement d'isoler la dent des tissus environnants au moyen de rouleaux de coton, et de bien l'assécher. On trempe ensuite une pointe de bois d'oranger dans une solution de formaline à 40%, et l'on brunit durant une minute ou deux la surface de la dent en question. D'autres emploient la même technique mais en remplaçant la formaline par la benzocaïne.

Cette benzocaïne peut aussi servir comme topique pour insensibiliser la muqueuse au point de ponction. Il ne s'agit que d'en mettre un peu sur un applicateur avec lequel on badigeonne la muqueuse durant 30 secondes et alors tout est prêt pour l'injection. Parmi les autres topiques fréquemment employés et donnant d'aussi bon résultats, il y a celui du Dr Mead^[17], celui de Tainter et Moose (Benzocaïne en solution dans l'alcool à 70%) et un dernier composé de

Butyne	10%
Cocaïne	4%
Phénol	4%
Amylcaïne	5%

D'après nombre d'auteurs, comme Adams, Everson et Weiss^[18], l'appréhension de la douleur est presque aussi désagréable que la douleur elle-même; et l'imagination peut causer autant de souffrance que des impulsions nerveuses afférentes. Ces craintes, nous les possédons dès la naissance et elles nous viennent de l'expérience des générations précédentes; c'est pourquoi on a tant de peine à les contrôler.

Il n'est pas un dentiste, si habile qu'il soit, qui puisse dire à son patient, "Je suis sûr que ça ne vous fait pas mal." Car il est prouvé qu'il peut exister une douleur psychosomatique. Pour nous, un des plus surs moyens à notre disposition pour prévenir cette douleur, c'est de donner une prémédication aux patients, que l'on

croit susceptibles d'un tel état nerveux. Ordinairement $\frac{3}{4}$ à $1\frac{1}{2}$ grs de Nembutal suffisent.

Comme il s'agit de diminuer par tous les moyens possibles, cette crainte qui empêche les patients de se présenter chez le dentiste il est important de ne rien négliger du côté psychique, même lorsqu'il y a eu prémédication. Ainsi, il est de toute nécessité de donner au patient le calme de tout ce qui l'environne, d'avoir une salle d'opération où tout est disposé avec ordre et à l'abri de tout bruit. Avec cette ambiance et la prémédication, et la confiance du patient dans l'opérateur, il est très peu de cas où un dentiste ne puisse éliminer ou prévenir la douleur, dont l'origine est surtout psychique.

Quant à la douleur physique, les différentes méthodes que nous venons d'exposer constituent certes un arsenal précieux, mais non infaillible, pour le contrôle de cette douleur. Il en est même quelques-unes qui ne devraient pas être employées. Ainsi, pour désensibiliser la dentine, le Dr E. B. Manley s'oppose catégoriquement à l'application de poisons protoplasmiques à cause du danger qu'ils comportent pour la vitalité de la pulpe^[19]. Ils ne devraient être employés que pour les dents sensibles au collet. Parmi ces médicaments, on peut classer la pâte du Dr Buckley.

Les autres, tout en étant très utiles, ne sont pas d'une efficacité absolue, on s'en est déjà rendu compte. Seule l'anesthésie sous toutes ses formes peut enrayer complètement toute douleur. Mais là encore surviennent d'autres problèmes; pour l'anesthésie locale, c'est ordinairement la ponction que le patient redoute. Quant à l'anesthésie générale, les déboursés supplémentaires, qu'elle exige, la rendent prohibitive pour certaines classes de patients. Il n'existe donc aucune méthode sûre de contrôle de la douleur en dentisterie, à l'exception de l'anesthésie.

S'il est un idéal que l'on peut se proposer en regard de ce contrôle de la douleur, c'est bien celui de trouver un moyen mécanique de travailler sur la dent, sans douleur et sans incommodité sérieuse pour le patient. Ce jour où les dentistes

pourront proclamer cette victoire sur la douleur, ce jour, dis-je, marquera une ère nouvelle pour la dentisterie; ce sera l'âge d'or. L'abîme qui sépare le patient du dentiste sera comblé, les patients ne craindront plus de recevoir les services dentaires adéquats, la santé sera améliorée et les médecins devront trouver d'autres explications aux troubles digestifs, intestinaux et névralgiques.

Un article publié par le Dr Everson montre, d'après une enquête par le Service de Santé Public des Etats-Unis, que 58% de la population de ce pays peut financièrement se procurer des soins dentaires et ne le font pas à cause de la crainte de la douleur^[18]. Et Burnap écrit aussi: "Les citoyens de la ville d'Oklahoma furent questionnés en 1942: "Pourquoi les gens attendent-ils si longtemps avant de se présenter chez le dentiste?" Plus de 50% des gens répondirent que c'était la crainte de la douleur^[20].

En attendant cet âge d'or de la dentisterie, il est de notre devoir d'éliminer, autant que faire se peut, la douleur de tous les procédés dentaires. Au point de vue humanitaire, c'est déjà une satisfaction que de soulager son semblable; au point de vue social, c'en est une autre de lui faciliter l'accès du fauteuil dentaire. De cette façon, nous accomplissons notre devoir de lui conserver sa santé par tous les moyens mis à notre disposition. Et seule la douleur nous en empêche!

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SUMMARY

Many ways have been proposed to minimize pain in operative procedures. The author studies the mechanism of pain production within the tooth during the preparation of cavities and comments the following techniques that have been recommended to reduce the pain:

- 1) sharp cutting instruments
- 2) cooling of the tooth during drilling
- 3) Airdent system
- 4) rubber dam and heat to counteract humidity of the tooth itself.
- 5) chemical substances in contact with the dentine: Vapocaine, Ethyl Chloride, Buckley's paste, Hartman's solution, alcool (70%), alcool and chloroform.

The author covers also the pain produced by fillings inserted too near the pulp chamber and indicates ways of preventing same. Sensitiveness experienced at the enamo-cementum junction of the neck of the tooth is also discussed and treatment is indicated. Pain caused by puncture of needle in local anesthesia is studied and formulae to anesthetize the mucous membrane are given.

Premedication is advocated for all operative procedures in nervous patients. The author concludes in stating that local anesthesia remains the safest and cheapest method to abolish pain in cavity preparation.

Méfais de la Pénicilline

Depuis les sept ans de son emploi comme médicament, qui a bouleversé le monde, la Pénicilline a souvent occasionné des éruptions cutanées banales. Parfois, elle a donné des réactions plus sérieuses.

Dans la revue, U.S. Armed Forces Medical Journal, livraison d'octobre, le capitaine Robert L. Gilman décrit, dans un article, la multiplication, en nombre et en gravité, des méfaits de la Pénicilline. Ces réactions, qui s'apparentent à celles éprouvées après l'administration d'anciens sérums, font croire que la Pénicilline serait un agent sensibilisateur d'une telle puissance qu'un second traitement n'est pas possible avant que ne s'écoule une certaine période de temps.

L'auteur qualifie la Pénicilline de "risque allergique" et rapporte que les réactions des patients, qui sont sensibilisés à l'avance se traduisent par des frissons, température, prostration, symptômes d'arthrite et choc. La guérison est lente et il peut y avoir des rechutes. La pire chose, qui puisse arriver, d'après le Dr Gilman, est de traiter un malade avec la Pénicilline, quand celui-ci se plaint de vagues symptômes, quand celui-ci souffre précisément d'une réaction due à la Pénicilline.

L'auteur préconise une réévaluation de l'emploi thérapeutique de la Pénicilline, une justification sérieuse de chaque dose et une étude des quantités prescrites. "Il faut délaissier cette mentalité, qui a cours dans plusieurs milieux, qui veut que cet antibiotique est une panacée et que son emploi préventif est justifié. Il faut non seulement cesser de l'employer couramment, avant toute opération dentaire ou chirurgicale, mais il faut aussi se garder de l'administrer à tout propos pour toutes sortes de bobos."



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Souhais de la saison

Le Comité de Rédaction de la section française du Journal de l'Association Dentaire Canadienne est heureux de souhaiter à tous ses lecteurs ses meilleurs voeux pour une Bonne et Heureuse Année.

Puisse la première année de la deuxième partie de notre siècle leur continuer santé, bonheur et prospérité!

La dentisterie préventive

Cette expression évoque des idées les plus diverses au sein de notre profession. Le but visé la conservation des dents—est évidemment le même pour tous les praticiens—mais les moyens d'atteindre cette fin sont des plus mêlés et souvent contradictoires.

Pour quelques-uns, cette prévention doit porter chez les enfants et ne consister qu'en application de fluor sur les dents temporaires; pour d'autres, prévention dentaire veut dire lutte à la carie par toutes les méthodes préconisées, depuis toujours: alimentation rationnelle, hygiène buccale, obturation des cavités creusées par la carie elle-même, etc. La plupart des dentistes se posent cette limite à la préservation des dents et croient qu'ils ont accompli leur devoir quand ils ont mis en pratique, auprès de leur clientèle, ces données de la science dentaire.

Pourtant, la prévention est faite d'un domaine beaucoup plus vaste et embrasse, en vérité, toutes les phases de la profession dentaire. Il est vrai que la carie, est l'ennemi No 1 du dentiste, mais il est d'autres adversaires

nombreux, responsables de la disparition des dents et des crêtes alvéolaires.

Il serait long d'énumérer tous les facteurs susceptibles de miner une denture normale; ces causes peuvent être toutes corrigées avant qu'elles n'accomplissent leur oeuvre néfaste par certains traitements spécifiques, qui, donnés à temps et à bon escient, font avorter des désorganisations sérieuses.

Citons les occlusions déséquilibrées, dont les lignes de force désaxées exercent sur certaines dents des pressions exagérées, qui en détruisent le procès alvéolaire et entretiennent des pathologies périodentaires, sources importantes d'élimination des dents.

Mentionnons ces dentiers, dont l'articulation est faussée et qui prédisposent à la résorption des crêtes alvéolaires et à la formation d'hyperplasie muqueuse, qui constitue parfois le premier stage de néoplasmes malins. Le remplacement des dents manquantes joue aussi un rôle transcendant dans la prévention dentaire, en maintenant les points de contact et en prévenant l'allongement des dents antagonistes et l'élongation des tissus durs périphériques.

La confection d'appareils de prothèse partielle et des ponts et couronnes est faite d'abord dans un but de restauration fonctionnelle, phonétique et esthétique; mais cette prothèse ne doit pas se faire au détriment du système dentaire, en sabotant son intégrité.

Tous connaissent les méfaits des dents en malposition et les désordres qu'elles entraînent: carie, gingivite, occlusion traumatique, etc. Ces anomalies peuvent être corrigées par des traitements d'orthodontie adéquats, pour ne citer que ceux-ci.

Il y a une foule d'autres considérations, qui pourraient être apportées et qui font partie du domaine de la prévention.

Le dentiste moderne se doit de mettre en pratique ces principes de conservation des dents; malheureusement, le dentiste connaît mal ces principes, ou du moins, en a une conception nébuleuse ou imprécise. Notre profession fait actuellement face à une crise; nous sommes à une croisée des chemins. Le problème de l'heure n'en est pas un qui peut se régler à coup de lois ou de réglementation; il repose sur un état d'esprit, qui nous concerne tous, vous et moi. L'assurance-santé nous englobera peut-être, mais il est encore temps de prouver à l'homme de la rue que nous sommes prêts, capables et désireux de satisfaire son désir pour de meilleurs services, sans sacrifier nos principes consacrés par le temps. La réponse à ce problème est la mise en pratique, tous les jours, des nouveaux concepts de dentisterie préventive. Voici un programme, qui serait la réponse de notre profession aux propositions d'assurance-santé:

a) addition au curriculum de nos facultés dentaires d'une série de cours portant sur la prévention dentaire, de façon à donner à nos étudiants des notions claires sur cette matière. Ces démonstrations théoriques et pratiques toucheraient à toutes les branches de l'enseignement, mais tireraient de chacune d'elles le côté préventif de ses données.

b) conférences et cliniques organisées par nos sociétés et associations, où des hommes de valeur viendraient nous exposer les théories les plus récentes dans ce champ prophylactique.

c) mise en pratique, dans nos cabinets, de tous les principes de prévention. Il faut considérer la cavité buccale comme un organe, dont toutes les parties composantes contribuent à la physiologie de l'ensemble. Il faut prendre le temps d'expliquer à nos patients ces conceptions. Le public est inondé de littérature traitant de dentisterie d'Etat. Faisons-lui connaître notre côté de la question.

Gérard de Montigny

Un moyen facile de garder des dents saines

par le DR CHARLES W. FREEMAN

Doyen de l'Ecole dentaire de Northwestern University
en collaboration avec William F. McDermott

Note de la rédaction : Nous avons crû intéresser nos lecteurs en reproduisant dans notre Journal un article de la revue *Sélection du Reader's Digest* (livraison de septembre 1950). La grande diffusion de cette revue a porté à la connaissance de milliers de nos patients ces données d'hygiène dentaire et il est bon, pour plusieurs raisons, que la profession dentaire soit renseignée sur cette littérature profane.

L'art dentaire vient de tirer les enseignements d'une très vaste enquête, fort coûteuse certes, mais d'une immense portée pratique. Entreprise voici près de trois ans par l'Ecole dentaire de Northwestern University, cette enquête révèle que *l'on peut éviter 50 à 60% des caries dentaires en se nettoyant les dents tout de suite après le repas.*

Dirigées par le Dr Leonard Fosdick, professeur de chimie à l'Ecole dentaire, les recherches ont porté sur 946 étudiants des deux sexes choisis dans cinq universités. Pendant deux ans, un premier groupe comprenant 523 étudiants se brossa les dents avec une pâte neutre dans les dix minutes qui suivaient chaque repas. Quand ils ne pouvaient, pour une raison ou une autre, utiliser la brosse, ils devaient se rincer soigneusement la bouche à l'eau. Les 423 autres continuèrent, comme d'habitude, à ne se brosser les dents que matin et soir.

Au bout de la première année, un examen dentaire général complété par des radiographies montra que chez les jeunes gens du deuxième groupe il était apparu

2.2 nouvelles caries par sujet en moyenne, contre 0.8 chez ceux du premier, soit une différence de 63%. A la fin de la seconde année, la différence était encore de 53%.

Une suite d'observations attentives a fourni le point de départ de toutes ces recherches. La carie dentaire apparaît comme une "maladie de gens civilisés". Elle est en effet rare chez les peuples primitifs, et les crânes préhistoriques révèlent chez nos ancêtres une denture remarquablement saine.

L'accroissement exagéré de notre consommation de sucre et d'autres hydrates de carbone est en grande partie responsable de nos ennuis dentaires. On sait aujourd'hui avec certitude que la carie est provoquée surtout par la fermentation des sucres contenus dans les aliments, la confiserie et les liqueurs douces. La flore microbienne buccale transforme rapidement ces sucres en acides qui attaquent les dents.

Moyen de défense naturel, la salive tend à neutraliser l'acide. Si elle parvient à remplir cette fonction chez les sujets qui consomment peu de sucre, elle se montre

malheureusement inefficace chez les grands amateurs de sucreries.

La carie dentaire n'est pas due à une érosion mécanique comparable, par exemple, au filet d'eau qui tombe sur une pierre. Elle est produite par une série d'attaques-éclair de l'acide qui agissent à la manière de coups de ciseau répétés. Chaque attaque fait sauter un minuscule fragment d'émail. L'action commence souvent dans les trois minutes qui suivent l'ingestion de sucre. Elle atteint son maximum au bout de 20 à 30 minutes et se poursuit jusqu'à ce que la salive contre-attaque avec succès.

La rapidité d'action de l'acide sur les dents varie d'individu à individu. Il en est de même de la réaction salivaire. Lorsque l'acide agit vite et la salive lentement, le sujet présente sans cesse de nouvelles caries. Dans le cas contraire, le sujet—un sur 50 en moyenne—peut manger n'importe quel aliment sans jamais, ou presque, avoir une dent gâtée. La plupart des gens se situent entre ces deux types extrêmes.

Se brosser les dents, le soir, juste avant de se coucher, et le matin, au saut du lit, voilà qui nettoie les dents, purifie l'haleine et laisse un goût agréable dans la bouche. Mais cela ne prévient guère les caries.

Depuis des années, nombre de dentistes ont l'habitude de se laver les dents immédiatement après les repas ou après l'absorption de sucre sous une forme quelconque, et recommandent à leurs clients de faire comme eux. Chez quiconque suit ce conseil, on enregistre un recul très net de la carie dentaire.

Le Dr Fosdick, qui était autrefois sujet aux caries, n'en a plus eu une seule depuis 1937. Ses trois enfants, âgés de 11, 13 et 16 ans, n'en ont jusqu'ici présenté qu'une ou deux chacun, c'est-à-dire bien moins que la plupart des enfants de leur âge.

J'ai moi-même, depuis 20 ans, adopté l'habitude de me brosser vigoureusement les dents après chaque repas et chaque ingestion de sucre. De la sorte, moi qui avais souvent des caries, je n'en ai eu que trois depuis 1930. Je consomme également moins de sucre, ce qui contribue à cette amélioration.

La plupart des étudiants qui s'étaient prêtés à notre enquête absorbaient des liquides doux et de la confiserie dans le courant de la journée. Ceux qui, pour une raison ou une autre, ne pouvaient le faire, eurent moins de caries. Il en fut de même, d'autre part, chez les étudiants qui prenaient soin de se rincer la bouche après avoir bu ou mangé des choses sucrées. Une enquête qui ne porte que sur deux années, si elle n'autorise pas des conclusions définitives, s'avère néanmoins singulièrement démonstrative. Des expériences plus restreintes ont fourni des résultats semblables. Il est donc logique de penser que le fait de se brosser les dents ou de se laver la bouche immédiatement après avoir mangé empêcherait l'apparition de millions de caries. L'agent essentiel de protection, c'est tout simplement l'eau.

Les caries, c'est un fait, apparaissent à une cadence telle qu'on ne saurait prétendre les soigner toutes à temps. Il semble donc que seul un programme de soins dentaires préventifs ait des chances de succès.

D'importantes recherches effectuées au cours de ces 20 dernières années ont permis de faire des progrès notables, et nous pouvons espérer disposer bientôt d'une arme préventive efficace. Plusieurs produits: le fluor, les dentifrices ammoniacaux, les vitamines K, etc., ont été mis à l'épreuve, mais, malgré quelques résultats encourageants, les essais n'ont pas encore franchi les limites du stade expérimental.

Nous recommandons les quelques règles simples que voici, fondées sur notre expérience:

1° Brossez vos dents matin et soir comme d'habitude. Brossez-les par surcroît *immédiatement* après chaque repas, toutes les fois que la chose est possible, avec un dentifrice ou même de l'eau ordinaire.

2° A défaut de brossage, après chaque repas ou après avoir consommé des aliments sucrés, prenez une gorgée d'eau et rincez-vous bien la bouche pendant quelques instants avant de l'avaler. Ce petit exercice n'est ni inconvenant ni gênant, et ne risque nullement d'attirer l'atten-

tion. Vous arriverez ainsi à dissoudre tout ou presque tout le sucre demeuré dans votre bouche, et à balayer l'acide qui peut s'être formé.

Je connais des gens qui ne se séparent jamais de leur brosse à dents miniature. Les messieurs la mettent dans leur poche, les dames dans leur sac, de façon à pou-

voir s'en servir dès que l'occasion s'en présente. C'est là une sage mesure de précaution. Nous avons de bonnes raisons de penser que les prescriptions d'hygiène buccale que nous venons de vous donner feront tomber de moitié le nombre des caries chez ceux qui les appliqueront avec persévérance.

Nouvelles de l'Association

Démission du Dr W. M. Blair

Le docteur W. M. Blair fut le représentant de la Saskatchewan au Bureau des Gouverneurs de l'A. D. C. dès 1947. A cause de son état de santé, le Dr Blair, qui fut toujours un délégué des plus précieux, regrette d'être forcé de démissionner. Le Dr Blair a laissé sa pratique à Regina et se propose de recommencer à Calgary.

Numéros du Journal demandés

Les livraisons suivantes du Journal de l'A. D. C. sont demandées aux quartiers-généraux de l'Association:

janvier et février 1949
avril et mai 1950

Quiconque pourra disposer de ces numéros est prié de les faire parvenir à 211 rue Huron, Toronto.

Les canadiens fréquentent-ils souvent le bureau du dentiste?

Une enquête Gallup fut instituée récemment sur cette question "Depuis quand êtes-vous allé chez le dentiste?" Les réponses ont montré qu'environ un tiers de la population canadienne n'avait pas visité le dentiste depuis quatre ans. Cette enquête, entreprise d'un bout à l'autre du pays a fourni les données suivantes. Les chiffres obtenus aux Etats-Unis pour la même enquête sont mis en parallèle:

A peu près	Canada	Etats-Unis
1 mois ou moins	9%	10%
2 à 5 mois	12%	10%
6 à 11 mois	14%	14%
1 an	16%	16%
1 an et demi	2%	2%

2 ans	9%	10%
3 ans	6%	6%
4 ans et plus	29%	27%
jamais	1%	4%
douteux	2%	1%
	100%	100%

Deux remarques furent faites par les enquêteurs:

- 1) Au nombre des 29% qui déclarent n'être pas allés chez le dentiste depuis quatre ans et plus, se trouvait une petite proportion d'édentés complets.
- 2) Les femmes fréquentent légèrement plus les cabinets dentaires que les hommes.

Tournée du président dans l'ouest

Le président de l'A. D. C., le Dr. Lowery, a visité durant novembre, les sociétés dentaires suivantes:

- le 6 novembre Victoria, C. B.
- le 7 novembre Vancouver, C.B.
- le 9 novembre Kamloops ou Vernon, C.B.
- le 13 novembre Lethbridge, Alberta
- le 14 novembre Calgary, Alberta
- le 15 novembre Edmonton, Alberta
- le 17 novembre Saskatoon, Sask.
- le 18 novembre Regina, Sask.
- le 20 novembre Winnipeg, Man.
- le 22 novembre Fort William, Port Arthur

Nouveau représentant pour l'Île du Prince-Edouard

Le secrétaire de l'Association Dentaire de l'Île du Prince-Edouard fait part que le Dr J. P. Miller a été nommé repré-

sentant de cette province au Bureau des Gouverneurs de l'A. D. C. Le Dr L. M. Callbeck est appointé substitut. Le Dr Miller succède au Dr R. H. Barrett, qui fut le représentant, ces deux dernières années.

Projet de paiements anticipés pour les services dentaires

Il est évident qu'une modification dans l'aspect économique de la distribution des services de santé au public est en train de s'opérer. L'augmentation du coût de ces services de santé, la demande de plus en plus considérable pour ces services et la variation des conditions économiques et sociales ont donné lieu à plusieurs expériences dans ce domaine.

L'établissement de systèmes à paiements-anticipés pour les soins médicaux et hospitaliers, a progressé à un tel point, au Canada et aux Etats-Unis, qu'une grande partie de la population est complètement ou partiellement couverte pour ces dépenses. Ces organisations volontaires de santé sont nées de deux sources: d'abord, de compagnies d'assurances privées et ensuite du support de la médecine, en tant que profession organisée.

Cette initiative de la profession médicale a été prise sans aucun doute pour parer, si possible, à l'établissement d'un système d'assurance-santé obligatoire par le gouvernement. Le principe général, qui est à la base des projets libres, est de prodiguer la gamme la plus étendue possible de services médicaux pour le plus grand nombre possible d'individus. Ces plans ont grown comme des champignons. La protection est devenue de plus en plus grande, de sorte que maintenant il est possible de se procurer les moyens de couvrir toutes les dépenses occasionnées par les traitements médicaux et les soins à l'hôpital.

On croit que les plans libres, éventuellement, seront adoptés par presque tous ceux qui pourront payer. Maintenant que ce mouvement est lancé, on espère que le gouvernement se contentera d'assumer les cotisations à ces organisations déjà existantes pour les indigents, pour ainsi y faire participer tout le monde.

L'avenir nous dira si l'on a prévu juste. L'histoire de l'évolution de l'assurance-santé dans presque tous les pays relève que des plans, d'un caractère facultatif au début, sont devenus obligatoires avec le temps.

Cependant le coût élevé des frais d'administration d'une telle entreprise a toujours effrayé tout gouvernement, disposé à mettre sur pied un système du genre. Il est plausible que, si le fonctionnement d'organisations d'assurance-santé libres s'avère satisfaisant avec des frais d'administration relativement bas, toute l'organisation, si elle est établie, relève du contrôle unique ou quasi-unique des professions intéressées.

Jusqu'à maintenant, la dentisterie a accompli bien plus dans ce domaine des plans facultatifs. Une ou deux organisations du genre, mais d'un caractère partiel fonctionnent aux Etats-Unis. Le comité d'Etude d'Assurance-Santé de l'A. D. C. a étudié la question et a élaboré un plan-modèle, qui vous sera bientôt présenté dans les Délibérations 1950, de l'A. D. C.

Ce plan n'est pas considéré comme idéal et doit être encore travaillé.

Aux yeux du dentiste, il y a un facteur qui pourrait être un obstacle d'envergure dans l'adoption d'un plan facultatif: c'est son résultat final. La moyenne des dentistes se demandent comment une prime peut-être fixée quand il y a tant de diversité dans les besoins du patient et dans les genres de services possibles.

Ces idées sont semblables à celles qui étaient discutées au sein de la profession médicale, il y a 10 ou 15 ans. Les médecins se demandaient comment prévoir qu'un patient, qui payait \$1.50 par mois, aurait besoin d'une opération pour l'appendice ou toute autre opération, le premier mois après son inscription. Nous, dentistes, sommes-nous dix ans en retard dans nos spéculations?

Y a-t-il, fondamentalement, tellement de différences entre les services dentaires ou médicaux, sur cette question? Le public acceptera-t-il des plans dentaires facultatifs? Ces problèmes doivent-ils être étudiés sérieusement, à cette heure.

No 31.

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